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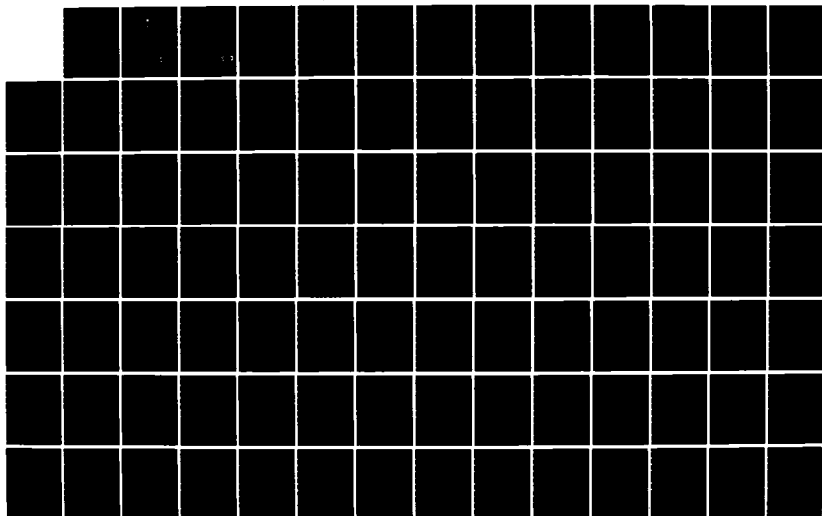
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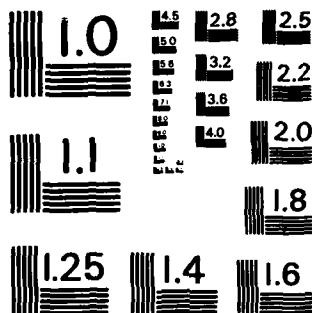
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A STUDY OF THE RELATIONSHIP  
BETWEEN YEARS OF COMMISSIONED SERVICE  
AND THE PERCEIVED IMPORTANCE  
OF THE MILITARY COMPENSATION PACKAGE  
TO AIR FORCE OFFICERS

THESIS

Daniel A. Cvelbar  
Captain, USAF

AFIT/GSM/LSY/84S-8

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YEARS OF COMMISSIONED SERVICE AND THE PERCEIVED  
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TO AIR FORCE OFFICERS

THESIS

Presented to the Faculty of the School of Systems and Logistics  
of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the  
Requirements for the Degree of  
Master of Science in Systems Management

Daniel A. Cvelbar, B.S.

Captain, USAF

September 1984

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Daniel A. Cvelbar

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Abstract

This research effort determined the relative importance of the overall military compensation package and its individual features in the decisions of Air Force officers to enter and remain in the service.

The research approach included the development of a questionnaire; a survey of Air Force officers in their first, fourth, tenth, and twentieth year of commissioned service; and data analyses which relied primarily on contingency table analysis techniques.

The results include the ranking of ten compensation features in the order of importance for the time the survey respondents decided to enter the Air Force and for the present. The rankings were compared for differences among the four year groups, and for changes between the time of entry and the present. One major conclusion of this investigation is that the compensation package is of greater value in retaining than in recruiting Air Force officers. A second major conclusion is that officers currently in the Air Force perceive that the compensation package is of greater importance in recruiting officers than officers who recently

entered the Air Force indicate. It was therefore recommended that policymakers exercise caution when examining attitudes and feelings of Air Force members. Recommendations of increased compensation for the purpose of enhancing recruitment could contribute to ineffective and inefficient results.

A STUDY OF THE RELATIONSHIP BETWEEN  
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I. Introduction

General Issue

Military personnel recruitment and retention are recurring issues within the Department of Defense (DoD). Even with retention rates and recruit quality near or at all-time highs (9:3), the issues continue to receive interest from top levels of DoD and Air Force management. In his annual state-of-the-military report to the Senate Armed Services Committee, General John W. Vessey Jr., USA, Chairman of the Joint Chiefs of Staff, stated,

Service members are the key to readiness, and unless these costs [of maintaining quality personnel] are paid, gains made in force quality and readiness may significantly decline. (9:3)

Air Force Secretary Verne Orr and Air Force Chief of Staff General Charles A. Gabriel expressed a similar concern in a recent joint posture statement:

Ultimately, our capability as an Air Force depends on our people. Recent combat has shown that well-trained, well-led, motivated people win battles. When a pilot resigns, when a crew chief hangs up his or her uniform, years of irreplaceable experience are lost. The best equipment money can buy will not carry the day without people. (24:89)

Experience is a central theme in both of the above statements. Due to retention problems in the past, it is not uncommon to find lieutenants filling captain's positions or captains filling majors' positions. And although it has not been measured, one might suspect that actions and decisions of less experienced personnel may reduce the efficiency and effectiveness of military management and operations.

There are other factors which compound the issues of recruitment and retention. First, recruitment demand is a function of retention. As retention rates decrease, recruitment demand increases. This increase requires higher recruitment expenses to maintain quality. Second, new personnel must be trained, and training is a significant expense. For example, the cost of training an F-15 or F-16 pilot is estimated to be over one million dollars (18:5).

Additionally, there are social factors which may soon affect the recruitment and retention issues. The DoD is asking for an increase of 29,900 personnel in fiscal year 1985 (25:3). At the same time, the source of new recruits is declining due to declining birth rates over the last 20 years. Given a constant retention rate, the proportion of recruits from the eligible population will have to increase just to maintain a constant force size. Higher retention rates and/or larger accessions must be realized to increase the personnel level. In light of the above factors, it is not difficult to understand why recruitment and retention remain a concern for top military leaders.



### Specific Problem

Air Force managers, desiring to recommend the best compensation package to support recruitment and retention in a cost-effective manner and within stringent budget constraints, need specific information on the relative importance of features of the package to potential Air Force officers and current officers at different points in their careers. This information can affect decision making in the allocation of funds within the package. According to Lieutenant Colonel Barry Barnes, Chief of Officer Retention Branch, Air Force Military Personnel Center (AFMPC), Randolph AFB TX, such information does not currently exist in any systematic form (38).

### Research Objective

The objective of this research is to provide information on the relative importance of the features of the military compensation package, as perceived by officers in their first, fourth, tenth, and twentieth year of service, to Air Force policymakers for their use in guiding the formulation of recruitment and retention strategies.

### Investigative Questions

The following questions directed the approach to the problem.

1. How do Air Force officers in their first, fourth, tenth, and twentieth year of commissioned service rank the features of the military compensation package in order of current importance to them?

2. What differences exist among the four year groups' current valuation of the importance of the overall compensation package and its features?

3. How do Air Force officers in their first, fourth, tenth, and twentieth year of commissioned service identify and rank the compensation features which were important in their decisions to enter the Air Force?

4. What differences exist among the four year groups' valuation of the importance of the overall compensation package and its features at the time they made their decisions to enter the Air Force?

5. How has the importance of the overall compensation package and its individual features changed between the time Air Force officers now in their first, fourth, tenth, and twentieth year of service decided to enter the Air Force and the present?

6. Do Air Force officers in each of the four year groups understand the importance of the compensation package to officers currently entering the Air Force?

#### Scope and Limitations

1. Only Air Force officers' inputs were solicited for this study. Additionally, only those officers stationed in the continental United States, and currently in their first, fourth, tenth, or twentieth year of service were surveyed.

2. Findings are subject to the current compensation package and the current economic, political, and social environment.

## II. Literature Review

### Introduction

This literature review identifies and describes recent empirical research on the topics of job recruitment and job turnover, two areas in which the military compensation package might be expected to directly affect Air Force personnel levels.

### Job Recruitment

Two important variables which have been investigated in studies on job recruitment are recruiting incentives and preferences among job factors. Each of these areas is discussed below.

Recruiting Incentives. Recruiting incentives may be defined as programs or features specifically intended to draw individuals into an organization. Most investigations in this area seek to evaluate the potential of various incentives to produce high recruitment levels. The findings are mixed.

Two studies (22:255-259) of the intentions of civilian males 16 to 22 years of age to enlist in the Navy found that when cash and education incentives were increased in number or value, no statistically significant increase occurred in enlistment. In fact, in a few cases increasing the value of

the incentives led to lower intentions to enlist. The investigators hypothesized that very large incentives may create recruitee distrust, or that a threshold level exists beyond which no additional incentives are effective.

A similar study (26:11-14) also shows that a cash bonus is not necessarily an effective stimulus to recruitment. The results of an investigation of college students show that a flat rate salary is preferred over a higher dollar valued combination of a bonus and a relatively lower flat rate salary as long as the difference between the two alternatives is not substantially large. For 63 percent of the students the difference was \$1300 or greater. It appears that the mere offering of a bonus is an ineffective recruitment incentive. Its effectiveness comes only from the additional monetary compensation it provides over alternatives.

On the other hand, studies provide evidence that some types of bonuses are effective as incentives. Results of a study conducted by the Center for Naval Analysis (23:9-12), show that education bonuses offered by the Army have been effective in motivating quality recruits to join the Army. After initiation of the bonus program, the number of high quality recruits jumped from 16,843 in 1980 to 33,978 in 1982. Regression analysis indicated that many of these recruits would not have joined the Army were it not for the education bonus.

One inference that can be drawn from the study in the preceding paragraph is that a potential recruit's intelligence influences his or her response to incentives. This inference is supported by a study of high school students conducted by the United States Army Recruiting Command (21). This study shows that there are differences in the desirability of various incentives based on mental aptitude. Individuals in the highest mental categories, as measured by the Armed Forces Qualification Test, ranked financial assistance for post-high school education as their number one reason for enlisting. Work experience in a job skill useful in civilian life, retirement benefits, free medical and dental care, and salary followed in the second through fifth rankings, respectively. In contrast, individuals in the lower mental categories placed retirement benefits, free medical and dental care, and salary ahead of education assistance and work experience. Additionally, an examination of preferences of various combinations of cash bonuses, post-service education benefits, and years of required service support the distinction between the mental categories. High valued education assistance was preferred by individuals in the highest mental category, and large cash bonuses were preferred by individuals in the lower mental categories.

All of the studies above used potential first time recruits or recruits who had just entered the service. Two somewhat different studies (16:62-65) asked officers who had

left and later rejoined the Air Force, or who had been in the Air Force for several years to indicate their reasons for rejoining or making the Air Force a career, respectively. Reasons for rejoining included: opportunity to fly, pay and financial security, good assignment offer, travel, retirement program, and benefits. The top eight reasons for making the Air Force a career are listed below in the order in which they were most frequently reported (16:65).

Enlisted

Retirement System  
Pay/Allowances  
Opportunity for  
Training/Education  
My Air Force Job  
Security of Air Force  
Life  
Voice in Assignments  
Travel/New Experiences  
Fringe Benefits

Officer

My Air Force Job  
Retirement System  
Pay/Allowances  
Promotion Opportunity  
Opportunity for  
Training/Education  
Security of Air Force  
Life  
Voice in Assignments  
Travel/New Experiences

Features of the compensation package are well represented in the lists from both studies.

Preferences Among Job Factors. The previous section of this literature review focused on the influence of specific recruiting incentives on recruitment levels. This section examines the relative importance of several job factors or characteristics which may influence an individual to pursue or accept a job offer. Of particular interest for this research effort was the relative importance of pay and benefits among all the other job factors.

In general, the studies suggest that pay and benefits are relatively more important than many other job factors. Concurrently, some job factors are more important than pay and benefits. In one study (37:50-68), job seeking senior college students ranked, in order of importance, 1) individual development, 2) pay, 3) environmental responsibility, and 4) fair employment practices on the attractiveness of a job.

In a study of job applicants at the Minnesota Gas Company (20:267-276), pay ranked fifth and benefits ranked eighth out of ten job factors. The ten job factors in this study are probably more representative of actual considerations in job selection processes than several of the factors in the study mentioned in the previous paragraph. The composite rank order of the job factors follows (20:269).

1. Security
2. Type of Work
3. Advancement
4. Company
5. Pay
6. Co-workers
7. Supervisor
8. Benefits
9. Hours
10. Working Conditions

Of the many trends found in this thirty year study, two of particular interest to this research are an increase in the importance of both pay and benefits over time. This study also found several relationships between demographic variables and the importance of pay and benefits. First, as age

increased, the importance of pay decreased. Second, single men differed from married, widowed, divorced, and separated men. Their preferences were similar to those of individuals under the age of 20. Finally, as education level rose, the importance of benefits decreased and the importance of pay increased. This study also found that employees placed increased importance on both pay and benefits after having worked for the company for several years. Also, this study found that job applicants predicted pay to be much more important for others than for themselves. As previously mentioned, pay ranked fifth among the job applicants. In contrast, these same individuals perceived pay to be the most important job factor for others.

One explanation of the differences between the importance of pay the respondents in the above study attributed to themselves and to others is the potential for social desirability response bias in the self report measures of the job factors. One study defined social desirability response bias as "a tendency for subjects to overestimate the importance to them of socially desirable job and organizational characteristics" (3:377). This study found that respondents ordered six job factors differently as a result of differences in data collection techniques. Three techniques directly measured the importance of the factors and resulted in identical rank orders. A fourth technique (Zedeck methodology) indirectly measured the factors' importance. A comparison of techniques' rankings



is shown below (3:381).

	<u>Zedeck</u>	<u>Others</u>
Pay and Fringe Benefits	1	4
Responsibility and Leadership	2	2
Use of Skills and Abilities	3	1
Autonomy and Independence	4	3
Flexible Hours	5	5
Essential Services	6	6

Inclusion of social desirability bias data (measured by the Marlowe-Crown Social Desirability Scale) into the analysis indicated that individuals high on the social desirability scale underreported the importance of pay and fringe benefits. For those individuals low on the scale, there were no significant differences among the rankings of the four techniques.

While pay appears to be an important factor in the attractiveness of a job, another study (34:103-109) suggests that it is more important for males than females. This study observed considerable variation between male and female college students' work related values. The three most important values for males were job security, opportunity for advancement, and obtaining a high salary. In contrast, females gave the highest rankings to opportunity to help people, freedom to use their own ideas and methods, and face-to-face contact with people. In addition, males indicated that they required several thousand dollars more in first year salary than females.

The above studies all examined the relative importance of pay or pay and benefits among several job factors important in an individual's decision to apply for or accept a job. Another study (33:353-364) specifically examined the effects of variations in salary levels independent of all other job factors. The study found that the same job description was judged differently depending on the range of salary available in other job opportunities. For example, more job interviews were rejected at \$11,200 in a narrow pay range (where \$11,200 was the lowest salary offered) than in a broad pay range (where some alternatives offered only \$8000). This study also provides evidence that job decisions are based on a minimal pay threshold, meaning other job attributes are irrelevant until some pay level is met.

#### Job Turnover

The literature on job turnover covers four topics: economic studies, job satisfaction, pay satisfaction, and job commitment.

Economic Studies. The literature consistently shows that economic conditions affect job turnover. Three studies which were reviewed examined the relationship between leading economic indicators and actual retention rates. In each study a regression model of the relationship was developed. In one study (10), economic indicators explained 100 percent of Air Force pilot retention rates. A study of Air Force

navigators (8) and a study of Air Force officers in the 28XX, 55XX, and 305X career fields (41) accounted for 87 and 70.4 percent of the variation in retention rates, respectively.

The high percentages in the previous paragraphs suggest that there is a strong direct relationship between the economy and job turnover. A study of unemployment influences on job turnover (35:845-856), however, suggests that economic factors play a moderating role in job turnover. This study compared the results of 26 job satisfaction/job turnover studies conducted over a 30 year period with unemployment rates and found that job dissatisfaction was a better predictor of turnover during periods of low unemployment than periods of high unemployment. Thus regardless of its role, the economy appears to be an important factor in job turnover.

Job Satisfaction. One definition of job satisfaction is "feelings of like or dislike of the job" (1:320-321). Albanese suggests that the major components of job satisfaction are " 1) attitudes toward work group, 2) general working conditions, 3) attitude toward company, 4) monetary benefits, and 5) attitudes toward supervision" (1:321). Most behavioral studies of turnover include job satisfaction as a predictor of turnover. Discussion of six studies which give primary emphasis to job satisfaction follows.

In a study of National Guard members (27:509-517), hierarchical regression analysis supported the hypothesis that job satisfaction and career mobility (age, tenure, and alternatives) influence turnover through career intentions (intentions to stay or quit)\*. These relationships accounted for 54 and 55 percent of the variation of turnover for two different population samples.

This last study indicates that there is a moderate to strong relationship between job satisfaction and turnover. Several other studies have examined the factors which contribute to job satisfaction or dissatisfaction. In one study of Army officers (5:181-207), pay, organizational control (degree of centralization), environmental push (number and quality of alternatives prior to accepting a job), and environmental pull (number and quality of alternatives after accepting a job) were found to indirectly affect turnover through job satisfaction. A regression model of these variables explained 65 percent of the turnover variation. In a similar study of Air Force Weapon System Security Specialists (29), equity (promotion, assignments), job challenge, and job freedom explained 27.5 percent of career intentions variation. Note that pay and benefits were not included as variables in this study. In yet another investigation of the factors which

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\*The variable career intentions is used as a surrogate of turnover in many job turnover studies, and it has been shown to be strongly related to actual turnover (36).

contribute to job satisfaction (7), opportunity (alternatives), pay and benefits, satisfaction with supervisory style, and assignment policies were found to be significant determinants of the career intent of Air Force pilots who left the Air Force. With the exception of opportunity, these same factors were found to be significant for Air Force navigators. Regression models explained 11 and 25 percent of career intent for pilots and navigators, respectively. Although not mentioned by the investigators, these low percentages could be attributed to the fact that the career intent variable was a measure of career intent at the time of commissioning. It is probable that career intent changed between the time the officers entered and left the service.

Another job satisfaction study (39:364-367) focused on relationships between demographic variables and job satisfaction. Several relationships were uncovered. First, job satisfaction increased with age. Second, job satisfaction was higher for those with a college education. Third, job satisfaction was higher for white-collar workers than for blue-collar workers. And finally, job satisfaction was almost always higher among employees with higher incomes. This study covered a seven year period (1972 through 1978), and was designed to represent the entire United States noninstitutionalized civilian population age 18 and older.

Pay Satisfaction. Pay satisfaction, one aspect of job satisfaction, was the subject of two studies that were reviewed. It is through the pay satisfaction component of job satisfaction that the importance of the military compensation package might be expected to be related to Air Force retention.

In a study of sales representatives (28:484-489), regression analysis results suggested that pay levels have an influence on turnover through their effects on pay satisfaction, which in turn, influences turnover through its effects on turnover intentions.

The literature also indicated that there are other variables, besides pay itself, which contribute to pay satisfaction and ultimately turnover. In one study (40:741-757), two pay satisfaction models (Lawler's, and Dyer and Theriault's) were shown to have predictive job turnover capability.

Lawler's model consisted of five predictor variables: 1) perceived personal job inputs, 2) perceived job demands, 3) perceived nonmonetary outcomes, 4) perceived inputs and outputs of others, and 5) wage history. Dyer and Theriault's model was a modification of Lawler's; their model included an additional variable -- perceived adequacy of the pay system administration. Dyer and Theriault's model was the more accurate of the two. Forty-four percent of those predicted to leave actually left, while 84 percent of those predicted to remain actually stayed. In comparison, Lawler's model

was accurate 33 and 76 percent of the time for those predicted to leave and stay, respectively.

Job Commitment. Job commitment, "the strength of an individual's identification with and involvement in a particular organization" (15:79), has received emphasis in the most recent development of turnover models. This variable does not appear to have the relationship with the military compensation package that job satisfaction has. However, it is important to know that there are variables other than pay and benefits which influence an individual to leave or remain in a job.

The literature shows that job commitment is an important variable in the turnover process. One study (12) found that job commitment explained 20 percent of the career intent of Air Force hospital personnel. In fact, in a regression model of turnover it was the only significant variable among several personal factors, job characteristics, and work experiences which were measured. In a similar study (4), job commitment explained 56 percent of the career intent variation of Air Force personnel. However, the investigators noted that several measures of job commitment could be interpreted as measures of desire to remain in the Air Force. This would not only explain the high correlation between job commitment and career intentions, but could also have affected the ability of other variables to enter the regression model.

Several other studies also support the relationship between job commitment and job turnover. However, the approach of these studies was to integrate the job commitment variable into turnover models which included job satisfaction. In two studies job commitment and job satisfaction were found to be parallel intervening variables. That is, both variables were related to job turnover, but not to each other. In one study of Air Force personnel (13) these variables, in a parallel structure, along with rank explained 14 percent of career intent variation. Similarly, in a study of civilian accountants (2:350-360), a model was developed with paths from organizational commitment, job satisfaction, and age leading to intentions to search for an alternative job. Paths from intentions to search for an alternative job, tenure, and job security then led to job turnover.

In contrast to the parallel relationship between job satisfaction and job commitment in the turnover models just described, several studies support a relationship of job satisfaction leading to turnover through job commitment. In one study of employees of a large insurance company (6:135-153), regression analysis suggested a model with a path from job satisfaction to job commitment, through career intentions, to turnover, and direct paths from age, routinization [i.e. repetitiveness, p.140] of job, and environmental opportunities to turnover.

Two other studies (15:78-95, 32:429-438) support the type of relationship between job commitment and job



satisfaction discussed in the preceding paragraph. These studies investigated the proposed Rusbult and Farrell Investment Model. Both studies found that greater rewards and lower job costs created greater job satisfaction. Greater job satisfaction, greater job investment, and poorer quality job alternatives led to increased job commitment. And finally, increased job commitment reduced job turnover.

### Summary of Main Points

A summary of the major points of the literature review follows.

1. Results of empirical studies on the effectiveness of recruiting incentives have been mixed. However, in several studies, education benefits seemed to have a significant effect on increasing recruitment, especially for individuals with higher mental aptitude. Additionally, retirement benefits, salary, and medical and dental care have ranked high among reasons for joining the service.

2. In studies that examined preferences among job factors for entry level individuals, salary generally was ranked in the top half of all factors. Additionally, there was evidence that salary was the most important factor in seeking employment, at least until some threshold level was met.

3. Economic studies have had the greatest success with predicting actual turnover. Intuitively though, it is difficult to visualize causal relationships between turnover and many of the leading economic indicators which worked their way into regression models.

4. Behavioral studies, which include constructs such as job satisfaction, pay satisfaction, and job commitment, have had moderate success in explaining job turnover. Also, the relationships within the behavioral/turnover models appear to be causal.

5. In both the economic and behavioral studies, compensation features appear to have some influence on turnover.

6. Only limited attention has been given to the importance of specific types of compensation, especially for job turnover. No study was found that specifically examined the relative importance of all of the features of the military compensation package on recruitment and retention.

### III. Methodology

#### Introduction

Use of a questionnaire and the Statistical Package for the Social Sciences (SPSS) (30) formed the methodology of this research. Several factors suggested this approach. First, the data of interest was not currently available. Second, a questionnaire appeared to be the most direct and least time consuming way to collect data on individuals' values, perceptions, and feelings. Finally, SPSS has received wide acceptance in social science research.

#### Population

The population of interest consisted of all active duty Air Force officers assigned to the continental United States who were in their first, fourth, tenth, or twentieth year of commissioned service. Several factors guided the selection of this population.

First, time constraints on the research itself precluded a longitudinal study of a particular year group or groups as they progressed through their careers.

Second, although a longitudinal study was not feasible, a crosssectional study was a satisfactory alternative. "Even with this design some of the benefits of a longitudinal study can be secured by adroit questioning about past attitudes, history, and future expectations" (14:86).

Third, to scope the research, the population was limited to four different year groups. The groups were selected so as to provide data at critical points in an officer's career and/or points of interest to policymakers. The first year group was selected to investigate whether there was a difference in the ranking of benefits between the time an individual decides to enter the Air Force and after coming on active duty. Depending on their source of commissioning, officers may have less than one and up to four years between the point in time they decide to enter the Air Force and their commissioning date. The fourth year group was selected because they are nearing the completion of their initial service commitment. They will soon have their first opportunity to voluntarily leave the Air Force. The tenth year group was selected because they are approaching promotion to major. It is generally agreed that after promotion to major retention is not a problem until retirement eligibility is obtained. Finally, the twentieth year group was selected because they normally would soon be eligible for retirement. Also, these individuals are or will soon be in a position of making policy recommendations which affect the contents of the military compensation package.

A fourth factor considered in selecting the population was duty location. It was decided that the time constraint and uncertainty in questionnaire return rate were prohibitive for including officers stationed overseas in the population.

The final consideration was to maximize the generalizability of the results. Therefore, the population was not limited by any demographic variables other than the exclusion of officers stationed overseas.

### Sample

A random disproportionate stratified sampling plan was used to select the sample. The sample size was based on a 95 percent  $\pm$  5 percent confidence/reliability level. This level provides 95 percent confidence that the true population parameters fall within  $\pm$  5 percent of the sample statistics of each survey question (17:1). The following equation was used to calculate the sample size (17:2).

$$n = \frac{Nz^2p(1-p)}{(N-1)d^2 + z^2p(1-p)}$$

where: n = sample size  
N = population size (22,835 estimate)(11:70)  
p = maximum sample size factor (0.5)  
d = desired tolerance (0.05)  
z = factor of assurance (1.96) for 95 percent confidence level

The calculated sample size from the above equation was 378. A 70 percent questionnaire return rate was anticipated based on returns from similar populations, and the relatively short length of this study's questionnaire. Adjustment for return rate resulted in a final calculated total sample size of 540. This total was then evenly divided over the four year groups, which resulted in group sizes of 135. Each group was then individually selected from an AFMPC personnel data base.

The selection procedure for each group involved the selection of the first 135 individuals on an alphabetical list of all individuals in the particular year group whose last digit of social security number was randomly generated.

#### Questionnaire Description

A questionnaire, titled "Military Compensation Package Survey," was developed as part of this research effort. Several sources aided its development: AFIT LS Operating Instructions 53-10, Attachment 5, "Checklist for Survey Instruments"; Parten, Surveys, Polls and Samples: Practical Procedures (31); and Emory, Business Research Methods (14).

The questionnaire consisted of two major sections. Section 1 measured demographic variables. Section 2 measured general opinions relative to the importance of the military compensation package. Specific measures are discussed below. In addition, a copy of the questionnaire is provided in Appendix A.

Section 1 of the questionnaire measured 14 demographic variables: rank, year of entry into the service, commissioned years of service, prior enlisted years of service, source of commissioning, command of assignment, Air Force Specialty Code, sex, age, family military background, marital status (current, and at the time of entry), and number of children supporting (current, and at the time of entry). The format of the questions were multiple choice and fill in the blanks.

Section 2 of the questionnaire contained nine opinion questions concerned with current and past feelings toward the military compensation package. The first three questions measured standard of living, and current and future financial security offered by the Air Force with the current compensation package. The possible responses to these multiple choice questions ranged from "Very High" to "Very Low" on a 7-point Likert scale.

The next two questions were concerned with current feelings toward the compensation package. The first of these questions asked the respondents to indicate the relative importance of the overall compensation package among all the reasons for being an Air Force officer. Again, a 7-point Likert scale was used. Responses ranged from "Very Important" to "Very Unimportant." In the second question, respondents were asked to rank features of the compensation package in order of importance to them. The questionnaire grouped the features into categories as shown below:

Commissary and Base Exchange.

Education Opportunities: Technical Training of Job, Off-Duty Education, Tuition Assistance, Air Force Extension Course Institute, GI Bill, Veterans Education Assistance Program, Professional Military Education, Air Force Academy, ROTC, and Air Force Institute of Technology.

Leave and Holidays.

Medical and Dental Benefits: Base Medical Care, CHAMPUS, Civilian Emergency Care, and Dental Care.

Monetary Compensation: Basic Pay, Allowances, Incentive Pay, and Bonuses.

Morale, Welfare, and Recreation: On-Base Facilities, Space Available Travel, and Transient Housing.

Professional Services and Assistance: Legal Assistance, Family Services Program, Air Force Aid Society, and VA Home Loans.

Retirement Benefits: Retirement Pay, Disability Pay, Survivor Benefit Plan, and Veteran's Group Life Insurance.

Survivor Benefits: Serviceman's Group Life Insurance, Dependent's Indemnity Compensation, Social Security Survivor Benefits, Death Gratuity, Social Security Death Benefit, and Veterans Administration Plot Allowance.

Tax Advantages: Federal, State, and Local.

Categorizing related features served two purposes. First, it reduced the number of items to be ranked, which increased the validity of the question. As stated in Surveys, Polls and Samples: Practical Procedures, "By the time [the respondent] reaches the fifteenth or twentieth rank . . . he is likely to be working haphazardly and merely for the sake of completing his task" (31:188). Second, categorization combines some features which are essentially indistinguishable, such as basic pay and the various allowances.

Appendix B contains reproduced excerpts of What's In It For Me? - An Air Force Benefits Handbook (19). These excerpts summarize each of the features of the compensation package.

The next two questions in section 2 solicited the respondents' feelings at the time they made their decision to enter the Air Force. The first question asked respondents to indicate the relative importance of the overall compensation package among all the reasons for their entering the Air Force. A 7-point Likert scale ranging from "Very Important"



to "Very Unimportant" was used. The second question asked respondents to identify and rank the compensation features previously outlined, but with reference to the point in time they made their decision to enter the Air Force.

The final two questions measured how the respondents perceived officers currently entering the Air Force valued the compensation package. The first question asked the respondents to identify the feature which they believed was most important for individuals currently entering the Air Force. The second question asked the respondents to indicate the relative importance they believed the overall compensation package had among all the reasons for which individuals were currently entering the Air Force.

### Statistical Analysis

The data from returned questionnaires was coded and entered into the AFIT Harris computer. Analysis of the data consisted of nine major steps. A discussion of each step follows.

The first step of the analysis was to document the characteristics of the respondents in the population sample. The SPSS FREQUENCIES subroutine was used to tabulate frequencies of the responses and, where appropriate, calculate medians or means of the responses to the survey questions.

The second step was to determine the relative order of the current importance of the ten compensation features for each of the year groups. For each year group median ranks

of the ten features were compared. Low values indicated greater importance than high values. Mean values were used to differentiate between features with equal medians.

The third step of the analysis was to determine whether there were differences among the four year groups' rankings of the features. Two-way contingency table analyses, using the SPSS CROSSTABS subroutine, were conducted. Contingency table analysis is used to identify and measure the strength of relationships between two or more variables (30:218-225). CROSSTABS calculates the level of significance of the hypothesized relationship. The level of significance is based on a comparison of actual and expected frequency distributions, with the expected frequencies based on a chi-square distribution. The two variables used in these analyses were the respondent's year group and the rank order the respondent assigned to the particular feature being examined. The null hypothesis for the analysis of each feature was that the year groups' frequency distributions of rank orders were identical. A significance level of 0.05 was used as the basis for rejecting the null hypothesis. "It has become convention in social science to accept as statistically significant relationships which have a probability of occurring by chance 5 percent of the time or less" (30:222). The strength of the relationships significant at the 0.05 level were measured by the Cramer's V. The Cramer's V is a variation of the chi-square statistic (30:224-225). Its values

range from 0 to 1. The larger the value the greater is the strength of the relationship.

The fourth step of the analysis was to determine if demographic and opinion measures (control variables) were related to the rankings of the current importance of the compensation features among the four year groups. Three-way contingency table analysis was performed with the following control variables: rank, prior enlisted service, source of commissioning, command of assignment, AFSC, sex, age, current marital status, current number of children supporting, standard of living, and current and future financial security. In three-way contingency table analyses, two statistics, the zero-order gamma and the first-order partial gamma, are compared to determine whether the control variable explains the relationship between the independent and dependent variables (year group and rank order). The zero-order gamma is a measure of the strength of the relationship between the independent and dependent variables. The first-order partial gamma is a measure of the relationship between the same two variables, but after controlling for a third variable. Both gammas can vary between -1 and +1. If the first-order gamma is closer to zero than the zero-order gamma, the difference between the two statistics is that portion of the relationship explained by the control variable (30:228-229).

The procedures of the next three steps paralleled the second, third, and fourth steps. However, the topic of

interest was the importance of the compensation features at the time the respondents were making their decision to enter the Air Force. Thus, in the fifth step of the analysis the relative importance of the features was determined. The primary criterion for differentiating the features' importance was the percentage of respondents who identified the features as having had an influence in their decision to enter. Median rank values were used to break ties. In the sixth step, two-way contingency table analyses were used to identify differences among the four year groups' rankings. And in the seventh step, three-way contingency table analyses were conducted. The control variables were prior enlisted service, source of commissioning, sex, family's military background, and marital status and the number of children supported at the time the respondents entered the Air Force.

The eighth step of the analysis was to identify changes between the entry and current importance of the overall compensation package and the individual features for each year group. Mean values of entry and current importance of the overall compensation package were compared. Only the relative rank orders of the individual features were compared.\*

The final step was concerned with the respondents' understanding of the major reasons for officers currently entering

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\*On the average, only 3.6 features were identified as being important at the time individuals decided to enter the Air Force. Frequency distributions and medians were therefore skewed to the higher importance values. This prevented proper use of statistical tests for comparing frequency distributions or medians between the two points in time.

the Air Force. Two comparisons were made. First, the mean values of the entry importance of the overall compensation package for the respondents themselves and the mean values attributed to officers currently entering the service were compared. Second, the distributions of the number one reasons the four year groups attributed to officers just entering were compared with the distribution the first year group provided for their own number one reason for entering.

#### Assumptions

The following assumptions underlie the choice of this methodology.

1. Respondents can remember their reasons for entering the Air Force.
2. Respondents are familiar with the features of the compensation package.
3. Respondents will answer the questionnaire truthfully.
4. There is no significant difference between individuals in the beginning and the end of an alphabetical list of names.
5. There is no significant difference between individuals who do and do not return completed questionnaires.

## IV. Results

### Introduction

As described in the methodology, a survey of Air Force officers was the primary source of data for this research effort. The purpose of this chapter is to present the results of that survey. The chapter includes a brief discussion of the questionnaire return rate, followed by the presentation of descriptive statistics for the responses to each question in the questionnaire.

### Questionnaire Return Rate

Three hundred eighty-two of the 540 questionnaires were returned in time for analysis. This equates to a return rate of 70.7 percent. All returned questionnaires were acceptable for data analysis, although several were missing some data. The attained return rate provided 95 percent confidence that the true population parameters fall within  $\pm 5$  percent of the sample statistics.

### Descriptive Statistics

The responses to each question are presented separately for each year group. In most cases both absolute (n) and relative (%) frequencies are reported, with the relative frequencies adjusted for missing data. If appropriate, medians and/or means are reported. Additionally, a complete listing of the raw data and a key to deciphering the data

are included in Appendix C (cases 383 through 386 were not received in time to be included in the results and analysis).

Question 1. Table 4.1 shows the frequency distribution of officer rank for each of the four year groups.

TABLE 4.1  
Distribution of Rank within Year Groups

Rank	Year Group							
	<u>1st</u>		<u>4th</u>		<u>10th</u>		<u>20th</u>	
	n	%	n	%	n	%	n	%
2nd Lieutenant	77	93.9	1	1.0				
1st Lieutenant			63	64.3				
Captain	5	6.1	32	32.7	91	92.9		
Major			2	2.0	6	6.1	27	26.0
Lieutenant Colonel					1	1.0	70	67.3
Colonel							7	6.7
Missing	0		0		0		0	
Sample Size	82		98		98		104	

Question 2. Question 2 identifies the year the respondents first entered the military service. A tabular presentation of this data does not serve a useful purpose. The sole intent of the question was to identify those individuals for whom the variable total years of service (commissioned +

enlisted) was not adequate for determining whether they entered the service prior to or after the discontinuance of the GI Bill (1 January 1977) and the change in the basis for computing retirement pay (8 September 1980). The anticipated problem was that if individuals had a break in their service, they could have originally entered under a compensation package slightly different than would be indicated by their years of service. In all 382 cases, total years of service properly identified those individuals who were or were not covered by the GI Bill. However, three individuals from the first year group (cases 249, 263, and 381) who first entered the service prior to the change in the retirement system would not have been properly grouped by total years of service. Also, half of the fourth year group could not be accurately accounted for even with the year of entry data, due to the fact that the retirement change was made effective in the ninth month of the year that many of the respondents entered the service. However, since the majority of the individuals actually commit themselves to the Air Force through their commissioning programs several years prior to actual entry, it is assumed that they entered the service based on the pre- 1980 change to the retirement system.

Question 3. Of the 382 returned questionnaires, 82, 98, 98, and 104 were from officers in their first, fourth, tenth, and twentieth year of commissioned service, respectively.



Question 4. Table 4.2 presents the frequency distributions of prior enlisted years of service for each year group.

TABLE 4.2  
Distribution of Years of Enlisted Service  
within Year Groups

Years	Year Group							
	<u>1st</u>		<u>4th</u>		<u>10th</u>		<u>20th</u>	
	n	%	n	%	n	%	n	%
0	61	74.4	65	66.3	64	65.3	89	85.6
1-4	7	8.5	16	16.3	15	15.3	10	9.6
5-8	5	6.1	7	7.1	7	7.1	4	3.8
9-12	6	7.3	3	3.1	7	7.1		
13-16	3	3.7	7	7.1	5	5.1	1	1.0
Missing	0		0		0		0	
Sample Size	82		98		98		104	

Question 5. Table 4.3 presents frequency distributions of the respondents' source of commissioning. The "Other" category includes Aviation Cadets, Airman Education and Commissioning Program, direct commissions, and medical and legal commissioning programs.

Question 6. Table 4.4 shows the frequency distributions of the respondents' command of assignment. Commands or agencies which received less than five percent of all responses were grouped into the "Other" category.

TABLE 4.3

Distribution of Commissioning Source  
within Year Groups

Source	Year Group							
	<u>1st</u>		<u>4th</u>		<u>10th</u>		<u>20th</u>	
	n	%	n	%	n	%	n	%
OTS	26	31.7	52	53.1	37	37.8	28	26.9
ROTC	34	41.5	24	24.5	40	40.8	49	47.1
Service Academy	11	13.4	14	14.3	13	13.3	16	15.4
Other	11	13.4	8	8.2	8	8.2	11	10.6
Missing	0		0		0		0	
Sample Size	82		98		98		104	

TABLE 4.4

Distribution of Command Assignment  
within Year Groups

Command	Year Group							
	<u>1st</u>		<u>4th</u>		<u>10th</u>		<u>20th</u>	
	n	%	n	%	n	%	n	%
AFSC	16	20.3	12	12.4	9	9.2	16	15.4
ATC	30	38.0	8	8.2	9	9.2	5	4.8
MAC	4	5.1	12	12.4	14	14.3	10	9.6
SAC	9	11.4	18	18.6	18	18.4	16	15.4
TAC	7	8.9	30	30.9	22	22.4	16	15.4
Other	13	16.5	16	16.3	26	26.5	41	39.4
Missing	3		1		0		0	
Sample Size	79		97		98		104	

Question 7. Table 4.5 shows the frequency distributions of the respondents' duty Air Force Specialty Codes (AFSC). For analysis purposes, AFSCs were grouped into five broad categories: 1) Operations - 000X, and 10XX through 22XX; 2) Personnel - 00XX, 09XX, and 70XX through 88XX; 3) Scientific/Engineering - 25XX through 28XX, 51XX, and 55XX; 4) Logistics - 30XX, 31XX, 40XX, and 60XX through 67XX; and 5) Medical - 90XX through 98XX.

TABLE 4.5  
Distribution of Duty AFSC  
within Year Groups

AFSC	Year Group							
	1st		4th		10th		20th	
	n	%	n	%	n	%	n	%
Operations	21	28.4	35	35.7	43	44.8	26	25.5
Personnel	7	9.5	16	16.3	13	13.5	27	26.5
Science/ Engineering	26	35.1	25	25.5	17	17.7	21	20.6
Logistics	10	13.5	13	13.3	16	16.7	21	20.6
Medical	10	13.5	9	9.2	7	7.3	7	6.9
Missing	8		0		2		2	
Sample Size	74		98		96		102	

Question 8. Table 4.6 presents the frequency distribution of the respondents' sex for each year group.

Question 9. Table 4.7 presents the frequency distribution of the respondents' age for each year group. Ages were grouped for data presentation and analysis.

TABLE 4.6

## Distribution of Sex within Year Groups

Sex	Year Group							
	<u>1st</u>		<u>4th</u>		<u>10th</u>		<u>20th</u>	
	n	%	n	%	n	%	n	%
Male	67	81.7	75	77.3	92	93.9	103	99.0
Female	15	18.3	22	22.7	6	6.1	1	1.0
Missing	0		1		0		0	
Sample Size	82		97		98		104	

TABLE 4.7

## Distribution of Age within Year Groups

Age	Year Group							
	<u>1st</u>		<u>4th</u>		<u>10th</u>		<u>20th</u>	
	n	%	n	%	n	%	n	%
22-25	58	70.7	15	15.5				
26-30	18	22.0	50	51.5	4	4.1		
31-35	6	7.3	20	20.6	63	64.3		
36-40			12	12.4	26	26.5	4	3.8
41-54					5	5.1	100	96.2
Missing	0		1		0		0	
Sample Size	82		97		98		104	

Question 10. Question 10 identifies individuals who had one or both parents in the military service for at least ten years during the respondents' lifetimes. Table 4.8 presents frequencies of the responses.

TABLE 4.8

Distribution of Parents' Military Background  
within Year Groups

Military Back- ground	Year Group							
	<u>1st</u>		<u>4th</u>		<u>10th</u>		<u>20th</u>	
	n	%	n	%	n	%	n	%
No	72	87.8	72	74.2	77	78.6	94	90.4
Yes	10	12.2	25	25.8	21	21.4	10	9.6
Missing	0		1		0		0	
Sample Size	82		97		98		104	

Questions 11 and 12. Tables 4.9 and 4.10 respectively show the frequency distributions of the respondents' present marital status, and their marital status at the time they entered the Air Force.

Questions 13 and 14. Tables 4.11 and 4.12 respectively show the frequency distributions of the number of children the respondents currently support, and the number they supported at the time they entered the Air Force.

TABLE 4.9  
Distribution of Current Marital Status  
within Year Groups

Current Marital Status	Year Group					
	1st n	1st %	4th n	4th %	10th n	20th n
Married	43	52.4	62	63.9	85	99
Never Been Married, But Currently Engaged	7	8.5	5	5.2		
Never Been Married; Not Currently Engaged	31	37.8	26	26.8	9	3
Divorced And Not Remarried	1	1.2	4	4.1	3	1
Legally Separated						1
Widower/Widow					1	
Other					1	
Missing	0		1		0	0
Sample Size	82		97		98	104

TABLE 4.10  
Distribution of Entry Marital Status  
within Year Groups

Entry Marital Status	Year Group							
	1st		4th		10th		20th	
	n	%	n	%	n	%	n	%
Married	27	32.9	25	25.8	39	39.8	32	30.8
Never Been Married, But Currently Engaged	12	14.6	9	9.3	9	9.2	16	15.4
Never Been Married; Not Currently Engaged	43	52.4	56	57.7	48	49.0	56	53.8
Divorced And Not Remarried			5	5.2	1	1.0		
Legally Separated			1	1.0				
Widower/Widow								
Other			1	1.0	1	1.0		
Missing	0		1		0		0	
Sample Size	82		97		98		104	

TABLE 4.11

Distribution of Current Number of Children  
within Year Groups

Children	Year Group							
	<u>1st</u>		<u>4th</u>		<u>10th</u>		<u>20th</u>	
	n	%	n	%	n	%	n	%
0	63	76.8	52	54.2	24	24.5	10	9.7
1	11	13.4	13	13.5	17	17.3	16	15.5
2	5	6.1	21	21.9	36	36.7	40	38.8
3	3	3.7	9	9.4	13	13.3	21	20.4
4			1	1.0	3	3.1	13	12.6
5					4	4.1	2	1.9
6					1	1.0	1	1.0
Missing	0		2		0		1	
Sample Size	82		96		98		103	

TABLE 4.12

Distribution of Entry Number of Children  
within Year Groups

Children	Year Group							
	<u>1st</u>		<u>4th</u>		<u>10th</u>		<u>20th</u>	
	n	%	n	%	n	%	n	%
0	71	86.6	79	82.3	86	87.8	90	86.5
1	7	8.5	10	10.4	8	8.2	10	9.6
2	4	4.9	6	6.5	4	4.1	3	2.9
3			1	1.0				
4							1	1.0
Missing	0		2		0		0	
Sample Size	82		96		98		104	



Question 15. Table 4.13 presents the frequency distributions of the respondents' opinions about the standard of living that the current compensation package provides to them. The means, included at the bottom of each table, were based on Likert Scale values ranging from "1" (Very Low) to "7" (Very High).

TABLE 4.13  
Distribution of Standard of Living Level  
within Year Groups

Level	Year Group							
	n	1st %	n	4th %	n	10th %	n	20th %
Very High	2	2.4					1	1.0
High	2	2.4	8	8.2	9	9.2	15	14.4
Slightly High	16	19.5	27	27.8	29	29.6	48	46.2
Neither High Nor Low	39	47.6	40	41.2	44	44.9	31	29.8
Slightly Low	21	25.6	18	18.6	14	14.3	7	6.7
Low	2	2.4	4	4.1	2	2.0	2	1.9
Very Low								
Missing	0		1		0		0	
Sample Size	82		97		98		104	
Mean		4.012		4.175		4.296		4.673

Questions 16 and 17. Tables 4.14 and 4.15 present the frequency distributions of the respondents' opinions about the current and future financial security that the current compensation package provides to them. As for question 15, mean values are presented in each table.

TABLE 4.14

Distribution of Current Financial Security Level  
within Year Groups

Level	Year Group							
	n	<u>1st</u> %	n	<u>4th</u> %	n	<u>10th</u> %	n	<u>20th</u> %
Very High	2	2.4	5	5.2	2	2.0	6	5.8
High	15	18.3	17	17.5	17	17.5	25	24.3
Slightly High	28	34.1	29	29.9	36	36.7	36	35.0
Neither High Nor Low	21	25.6	25	25.8	20	20.4	25	24.3
Slightly Low	13	15.9	16	16.5	19	19.4	6	5.8
Low	3	3.7	4	4.1	3	3.1	3	2.9
Very Low			1	1.0	1	1.0	2	1.9
Missing	0		1		0		1	
Sample Size	82		97		98		103	
Mean	4.549		4.526		4.490		4.835	

TABLE 4.15

Distribution of Future Financial Security Level  
within Year Groups

Level	Year Group							
	<u>1st</u>		<u>4th</u>		<u>10th</u>		<u>20th</u>	
	n	%	n	%	n	%	n	%
Very High	4	4.9	3	3.1	2	2.0	3	2.9
High	20	24.4	11	11.3	15	15.3	16	15.4
Slightly High	23	28.0	29	29.9	25	25.5	34	32.7
Neither High Nor Low	21	25.6	23	23.7	24	24.5	23	22.1
Slightly Low	11	13.4	16	16.5	21	21.4	13	12.5
Low	2	2.4	11	11.3	10	10.2	12	11.5
Very Low	1	1.2	4	4.1	1	1.0	3	2.9
Missing	0		1		0		0	
Sample Size	82		97		98		104	
Mean	4.695		4.103		4.173		4.279	

Question 18. Question 18 was a measure of the relative importance of the military compensation package among all the reasons for being an Air Force officer. Table 4.16 presents the frequency distribution and mean for each year group. The means were based on Likert scale values of "1" (Very Unimportant) through "7" (Very Important).

TABLE 4.16

Distribution of Current Importance Level  
of the Compensation Package  
within Year Groups

Level	Year Group							
	1st		4th		10th		20th	
	n	%	n	%	n	%	n	%
Very Important	12	14.6	32	33.0	38	38.8	37	35.6
Moderately Important	30	36.6	30	30.9	36	36.7	32	30.8
Slightly Important	16	19.5	21	21.6	16	16.3	29	27.9
Neutral	10	12.2	4	4.1	4	4.1	5	4.8
Slightly Unimportant	4	4.9	7	7.2	4	4.1		
Moderately Unimportant	5	6.1	1	1.0				
Very Unimportant	5	6.1	2	2.1			1	1.0
Missing	0		1		0		0	
Sample Size	82		97		98		104	
Mean	5.012		5.670		6.020		5.933	

Question 19. Figures D.1 through D.10, located in Appendix D, present the frequency distributions of rank orders assigned by respondents to each of the ten compensation features. Additionally, Table 4.17 presents the median and mean ranks for each feature.

TABLE 4.17

Median and Mean Ranks of the  
Current Importance of the Compensation Features  
within Year Groups

Feature	Year Group							
	1st		4th		10th		20th	
	M	$\mu$	M	$\mu$	M	$\mu$	M	$\mu$
Commissary and Base Exchange	5.5	5.63	5	5.41	6	5.74	6	5.62
Education Opportunities	4	3.67	5	5.08	6	5.59	6	6.29
Leave and Holidays	5	4.91	5	4.87	5	4.85	6	5.93
Medical and Dental Benefits	3	3.19	3	3.43	3	3.76	4	4.02
Monetary Compensation	2	2.88	1	2.41	1.5	2.10	2	2.05
Morale, Welfare, and Recreation	8	7.41	8	7.56	9	8.16	9	8.54
Professional Services and Assistance	7	7.07	8	7.81	8	8.02	8	8.02
Retirement Benefits	5	5.22	3	3.85	2	2.18	2	1.76
Survivor Benefits	8	7.51	7	6.99	8	7.43	5	5.68
Tax Advantages	8	7.44	9	7.56	8	7.05	7	6.85

M=median,  $\mu$ =mean

Question 19 also gave the respondents an opportunity to add other compensation features to the list of ten provided them. Respondents' inputs and their absolute frequencies follow: job security (1), job satisfaction (3), travel (3), patriotism (2), prestige (1), professional status (1), the

job itself (1), experience (1), and flying (4). With the exception of "flying", which would fall within the definition of technical training of the job (education opportunities), these additional items are not considered to be tangible features of the compensation package even though they may be highly valued by individuals.

Question 20. Question 20 was a measure of the relative importance of the overall military compensation package among all the reasons the respondents entered the Air Force. Table 4.18 provides the frequency distribution and mean of the responses for each year group. Again, means were based on Likert scale values of "1" (Very Unimportant) through "7" (Very Important).

Question 21. Figures D.11 through D.20, also located in Appendix D, present the frequency distributions of the rank orders assigned to each of the ten compensation features as they were important at the time the respondents were making their decision to enter the Air Force. Table 4.19 reports the ten features' median and mean ranks based on those individuals who identified and ranked the features as being important. Several respondents only identified features as being important without rank ordering them. Those responses constitute the missing data indicated in the figures.

Respondents also offered several other items as being important in their decisions to enter the Air Force. Again, many were not directly related to the compensation package:

TABLE 4.18

Distribution of Entry Importance Level  
of the Compensation Package  
within Year Groups

Level	Year Group							
	n	<u>1st</u> %	n	<u>4th</u> %	n	<u>10th</u> %	n	<u>20th</u> %
Very Important	13	15.9	22	22.7	28	28.6	22	21.4
Moderately Important	28	34.1	22	22.7	26	26.5	19	18.4
Slightly Important	14	17.1	20	20.6	20	20.4	22	21.4
Neutral	12	14.6	19	19.6	9	9.2	20	19.4
Slightly Unimportant	3	3.7	6	6.2	2	2.0	3	2.9
Moderately Unimportant	3	3.7	1	1.0	6	6.1	10	9.7
Very Unimportant	9	11.0	7	7.2	7	7.1	7	6.8
Missing	0		1		0		1	
Sample Size	82		97		98		103	
Mean	4.890		5.041		5.235		4.796	

duty to country - 4, the draft - 21, travel - 2, patriotism - 3, career advancement - 1, job satisfaction - 1, job security - 4, and experience - 2. Others listed included flying - 21 and deferred payment of government school loans - 1. This last item was not listed among the features in the questionnaire.

TABLE 4.19

Median and Mean Ranks of the  
Entry Importance of the Compensation Features  
within Year Groups

Feature	Year Group							
	M	<u>1st</u> $\mu$	M	<u>4th</u> $\mu$	M	<u>10th</u> $\mu$	M	<u>20th</u> $\mu$
Commissary and Base Exchange	4	3.94	4	3.93	5	5.06	4	4.52
Education Opportunities	1	2.26	1	2.00	2	2.62	2	2.64
Leave and Holidays	3.5	3.50	3.5	3.53	3	3.67	3	4.00
Medical and Dental Benefits	2	2.42	3	2.80	3	3.11	3	3.39
Monetary Compensation	2	1.92	2	1.83	1	1.70	2	1.89
Morale, Welfare, and Recreation	4	4.29	5	5.54	5	5.40	6	6.25
Professional Services and Assistance	4.5	4.33	6	6.43	7	6.90	7	7.33
Retirement Benefits	3	3.05	2	2.39	2	2.01	2	1.81
Survivor Benefits	5.5	5.83	4.5	4.92	5.5	5.93	4	4.25
Tax Advantages	3	3.64	5.5	5.30	8	7.33	6.5	6.42

M=median,  $\mu$  =mean



Question 22. Table 4.20 presents the frequency distributions of the features which the respondents identified as being the most important among all the features of the compensation package to officers currently entering the Air Force.

TABLE 4.20

Distribution of Compensation Features  
Attributed to Others as Being Most Important

Feature	Year Group							
	n	1st %	n	4th %	n	10th %	n	20th %
Commissary and Base Exchange	1	1.3	1	1.1			1	1.1
Education Opportunities	27	33.8	14	15.1	6	6.5	5	5.4
Leave and Holidays			1	1.1				
Medical and Dental Benefits	3	3.8	2	2.2	1	1.1		
Monetary Compensation	36	45.0	53	57.0	55	59.8	56	60.9
Morale, Welfare, and Recreation	1	1.3						
Professional Services and Assistance	1	1.3						
Retirement Benefits	11	13.8	22	23.7	30	32.6	30	32.6
Survivor Benefits								
Tax Advantages								
Missing	2		5		6		12	
Sample Size	80		93		92		92	

Question 23. Table 4.21 presents the frequency distributions and means of the relative importance of the overall compensation package that the respondents attribute to officers currently entering the Air Force. A Likert scale, ranging from "1" (Very Unimportant) to "7" (Very Important), was used to calculate the means.

TABLE 4.21  
Distribution of Entry Importance Level  
Attributed to Others  
within Year Groups

Level	Year Group							
	<u>1st</u>		<u>4th</u>		<u>10th</u>		<u>20th</u>	
	n	%	n	%	n	%	n	%
Very Important	27	32.9	33	34.4	43	44.3	45	44.6
Moderately Important	39	47.6	40	41.7	32	33.0	41	40.6
Slightly Important	10	12.2	16	16.7	16	16.5	7	6.9
Neutral	4	4.9	6	6.3	3	3.1	7	6.9
Slightly Unimportant	2	2.4	1	1.0	2	2.1		
Moderately Unimportant					1	1.0		
Very Unimportant							1	1.0
Missing	0		2		1		3	
Sample Size	82		96		97		101	
Mean	6.037		6.021		6.113		6.188	

## V. Analysis and Discussion

### Introduction

The purpose of this chapter is to report and discuss the findings of the analyses performed on the survey results presented in the preceding chapter. The detailed methodology of the analysis was reported in Chapter III. The organization of this chapter is formed by the successive treatment of the six investigative questions, in the order they were presented in Chapter I. Analyses beyond the original investigative questions conclude the chapter.

### Investigative Question 1

How do Air Force officers in their first, fourth, tenth, and twentieth year of commissioned service rank the features of the military compensation package in order of current importance to them?

Distributions of the ranks respondents assigned to each feature were introduced in Chapter IV and are located in Appendix D. Additionally, median and mean ranks were presented in Table 4.17. Table 5.1 shows a composite order of importance for the ten compensation features for each year group at the time respondents completed the questionnaire. The composite rank orders were primarily determined by comparing the features' median ranks. Small median values indicated a greater importance than did large values. In the cases where there were ties between or among medians, the composite rank

TABLE 5.1

Rank Order of Compensation Features  
for Each Year Group

Feature	1st	Year Group		
		4th	10th	20th
Commissary and Base Exchange	6	6	6	5
Education Opportunities	3	5	5	7
Leave and Holidays	4	4	4	6
Medical and Dental Benefits	2	2	3	3
Monetary Compensation	1	1	1	2
Morale, Welfare, and Recreation	8	8	10	10
Professional Services and Assistance	7	9	9	9
Retirement Benefits	5	3	2	1
Survivor Benefits	9	7	8	4
Tax Advantages	10	10	7	8

order was based on a comparison of mean ranks. In only two cases does the above procedure result in a composite order of importance different than one based solely on the mean ranks. The fourth year group's ninth and tenth ordered features would have been transposed, as would have the twentieth year group's fourth and fifth ranked features.

## Investigative Question 2

What differences exist among the four year groups' current valuation of the importance of the overall compensation package and its features?

A contingency table analysis between the respondents' year group and the level of importance they assigned the overall compensation package (survey question 18) found a significant relationship at the 0.0001 level. This indicates that at least one year group rated the importance of the compensation package differently than the other groups. The Cramer's V statistic (0.21030) indicates that the relationship is of relatively weak strength. A comparison of frequency distributions and means (Table 4.16) suggests that the importance of the overall compensation package increases with increased years of commissioned service up to some point between the four and ten year marks, after which it stabilizes. The mean rank of the first year group corresponds to the "Slightly Important" response. The means of the remaining three groups cluster around the "Moderately Important" response.

For each compensation feature, a contingency table analysis was conducted between the respondents' year group and the rank order they assigned to the feature. Significant relationships at the 0.05 level were found for education opportunities; leave and holidays; medical and dental benefits; morale, welfare, and recreation; professional services and assistance; retirement benefits; and survivor benefits.

Table 5.2 provides the exact significance level for each of the ten features. The table also provides Cramer's V statistics for those features significant at the 0.05 level. These statistics suggest weak to moderate relationships. Retirement benefits, education opportunities, and survivor benefits stand out as having the stronger of the relationships.

TABLE 5.2

Current Importance -  
Contingency Table Analysis Summary

Feature	Significance Level	Cramer's V
Commissary and Base Exchange	.3319	
Education Opportunities	.0000	.27095
Leave and Holidays	.0286	.19436
Medical and Dental Benefits	.0054	.20856
Monetary Compensation	.4043	
Morale, Welfare, and Recreation	.0179	.19022
Professional Services and Assistance	.0180	.19045
Retirement Benefits	.0000	.36278
Survivor Benefits	.0000	.25031
Tax Advantages	.1718	

In order to identify which year groups were responsible for the relationships, medians, means, and frequency distributions were compared among the four year groups for the seven features whose importance had a statistically significant relationship with the respondents' year group.

Figure D.2 shows a slight but consistent shift in the education opportunities' distribution of rank between adjacent year groups. The shift is toward the less important values for longer durations of commissioned service. A comparison of the median and mean ranks (Figure 4.17) supports this observation.

Figure D.3 and Table 4.17 indicate that the first, fourth, and tenth year groups value leave and holidays similarly. The significant difference appears to be between these three groups and the twentieth year group. The twentieth year group ranks this feature lower than the other year groups.

Figure D.4 and Table 4.17 show slight but consistent shifts in the importance of medical and dental benefits between adjacent year groups. The benefits received lower rank values for longer durations of commissioned service.

An examination of Figure D.6 suggests that the importance of morale, welfare, and recreation is nearly identical for the first and fourth year groups, and the tenth and twentieth year groups. The later groups placed slightly less importance on this feature.

Figure D.7 indicates that the importance of professional services and assistance decreases slightly between the first and tenth year groups, with the greatest change occurring between the first and fourth year groups. The tenth and twentieth year groups indicate similar levels of importance. Table 4.17 supports these observations.

Figure D.8 and Table 4.17 show relatively large consistent shifts in the importance of retirement benefits between the adjacent year groups. The direction of the shift is toward greater importance for longer durations of commissioned service.

Of the seven features in which the respondents' year group was found to have statistical differences in importance, only survivor benefits showed mixed trends. An examination of Figure D.9 and Table 4.17 indicates that the direction of shifts in importance between adjacent year groups fluctuate. However, the greatest difference among the year groups appears to be between the twentieth year group and the other three groups. The twentieth year group placed a significantly greater value on survivor benefits than did the others.

Although differences in the year groups' valuation of seven of the ten compensation features were found to be statistically significant, only the differences in education opportunities, retirement benefits, and survivor benefits appear to have practical implications. Differences among the year groups' relative importance of these three features crossed a wide range of rank orders. Table 5.1 shows ranges



of 3 to 7, 5 to 1, and 9 to 4 for these three features, respectively. In contrast, the other four features exhibit ranges of 4 to 6, 2 to 3, 8 to 10, and 7 to 9. Despite the differences, the relatively high valued features remain high across all year groups, while the relatively low valued features remain low.

Additional contingency analyses were conducted to determine if demographic and opinion variables which varied across the year groups played a role in the relationships described above. Table 5.3 presents the zero-order and first-order partial gamma statistics for three-way contingency table analyses. The zero-order gammas, presented directly above the first-order partial gammas, are a measure of the strength of the relationship between the respondents' year group and the rank they assigned to the compensation feature. The first-order partial gammas measure the relationship between the same two variables, but after controlling for a third variable. The gamma statistics for combinations of variables which account for at least twenty percent of the uncontrolled relationships are outlined in Table 5.3. Footnotes below the table present the percentages of the relationship which the control variables explain. These percentages indicate that the relationships between the respondents' year group and the ranks respondents assigned to compensation features are partially, and in some cases primarily, due to differences in their rank, age, current marital status, and number of

TABLE 5.3  
Current Importance -  
Three-Way Contingency Table Analysis Statistics

Feature	Rank	Prior Enlisted Service	Commission Source	Command	AFSC	Sex
Education Opportunities	.34226	.34226	.34226	.34175	.33974	.34129
	.11886 a	.34806	.33526	.33918	.28331	.32429
Leave and Holidays	.16435	.16435	.16435	.17707	.14084	.16371
	.08990 b	.19447	.14212	.17446	.11580	.17767
Medical and Dental Benefits	.20653	.20653	.20653	.20005	.24278	.20612
	.04091 c	.21013	.21915	.19878	.22825	.16823
Morale, Welfare, and Recreation	.24978	.24978	.24978	.24915	.25510	.24841
	.45183	.29224	.20732	.24404	.23701	.24753
Professional Services and Assistance	.18284	.18284	.18284	.17246	.16863	.18261
	.08339 d	.19441	.17374	.15279	.18553	.14923
Retirement Benefits	-.53251	-.53251	-.53251	-.52580	-.51846	-.53193
	-.64472	-.58318	-.50918	-.48741	-.53576	-.51293
Survivor Benefits	-.25765	-.25765	-.25765	-.25967	-.25638	-.25698
	.09965 e	-.27096	-.22237	-.28176	-.22618	-.25683

a. 65, b. 45, c. 80, d. 54, e. 61

TABLE 5.3  
(Continued)

Feature	Age	Current Marital Status	Current Children	Standard of Living	Current Financial Security	Future Financial Security
Education Opportunities	.34129 f .24266	.34067 f .28386	.33784 n .25312	.34129 n .31630	.33823 n .36622	.34129 n .33368
Leave and Holidays	.16371 k -.19543	.16872 k .11933	.16781 o .00593	.16371 o .16221	.16206 o .14927	.16371 o .16188
Medical and Dental Benefits	.20612 g .20063	.22479 g .23577	.20869 g .24287	.20612 g .23151	.20313 g .20341	.20612 g .21932
Morale, Welfare, and Recreation	.24841 h .16289	.24466 h .20568	.24946 p .13871	.24841 p .20880	.24976 p .23599	.24841 p .22972
Professional Services and Assistance	.18261 i .13870	.16369 i .12215	.17952 i .16135	.18261 i .15795	.18599 i .21008	.18261 i .18751
Retirement Benefits	-.53193 j -.15412	-.52698 j -.47064	-.53276 j -.48231	-.53193 j -.51639	-.53268 j -.50289	-.53193 j -.54474
Survivor Benefits	-.25698 k -.04414	-.26332 k -.20882	-.25608 k -.09915	-.25698 k -.22860	-.25290 k -.25435	-.25698 k -.24775

f. 29, g. 34, h. 24, i. 71, j. 83, k. 29, l. 25, m. 21, n. 25, o. 96, p. 44, q. 61

children they currently support. These results were not unexpected. Differences within these variables suggest increased maturation and responsibility, and therefore possible changes in personal values which could account for differences in importance among the various compensation features.

The other control variables in Table 5.3 accounted for little or no variation in the relationship between the respondents' year group and the ranks they assigned the features. This was expected for source of commissioning, command of assignment, AFSC, and sex. However, it was anticipated that prior enlisted service and the three opinion variables would have also explained significant portions of the relationship.

### Investigative Question 3

How do Air Force officers in their first, fourth, tenth, and twentieth year of commissioned service identify and rank the compensation features which were important in their decisions to enter the Air Force?

Table 5.4 presents the number and percentage of respondents from the four year groups that identified each feature of the compensation package as having been important in their decision to enter the Air Force. Table 4.19 presents the median and mean ranks of each feature. Additionally, Figures D.11 through D.20 illustrate the frequency distributions of the ranks respondents assigned to each feature. These tables and figures were used to construct composite rank orders of

TABLE 5.4

Distribution of Features  
Identified as Important in the Entry Decision  
within Year Groups

Feature	Year Group							
	n	<u>1st</u> %	n	<u>4th</u> %	n	<u>10th</u> %	n	<u>20th</u> %
Commissary and Base Exchange	17	20.7	15	15.3	18	18.4	29	27.9
Education Opportunities	71	86.6	62	63.3	66	67.3	49	47.1
Leave and Holidays	33	40.2	45	45.9	49	50.0	43	41.3
Medical and Dental Benefits	54	65.9	51	52.0	49	50.0	48	46.2
Monetary Compensation	52	63.4	63	64.3	73	74.5	60	57.7
Morale, Welfare, and Recreation	7	8.5	14	14.3	10	10.2	8	7.7
Professional Services and Assistance	6	7.3	9	9.2	10	10.2	6	5.8
Retirement Benefits	45	54.9	59	60.2	73	74.5	82	78.8
Survivor Benefits	6	7.3	14	14.3	14	14.3	14	13.5
Tax Advantages	11	13.4	11	11.2	10	10.2	12	11.5
Missing	0		0		0		0	
Sample Size	82		98		98		104	

the features for each year group, shown in Table 5.5. The primary criterion for determining the composite rank order was the percentage of respondents that identified the features as being important in their entry decisions. When percentages

TABLE 5.5

Composite Rank Order of the Entry Importance  
of the Compensation Features  
for Each Year Group

Feature	1st	Year Group		
		4th	10th	20th
Commissary and Base Exchange	6	6	6	6
Education Opportunities	1	2	3	3
Leave and Holidays	5	5	5	5
Medical and Dental Benefits	3	4	4	4
Monetary Compensation	2	1	1	2
Morale, Welfare, and Recreation	8	8	8	9
Professional Services and Assistance	9	10	9	10
Retirement Benefits	4	3	2	1
Survivor Benefits	10	7	7	7
Tax Advantages	7	9	10	8

among features were identical or within several points, medians, means, and frequency distributions were compared to determine their relative order of importance. Only the second and third ranked features of the first year group were transposed as a result of this secondary criterion. Thus, in general, the features that were frequently reported as being important

also received the lower median and mean values. And those features which were infrequently reported received the higher median and mean values.

Based on the percentages in Table 5.4, the features can be easily classified into two categories which discriminate the influence they had on the respondents' decisions to enter the Air Force. Five of the features had a strong influence on the entry decisions. These include education opportunities, leave and holidays, medical and dental benefits, monetary compensation, and retirement benefits. Each of these features was important for at least 40 percent of the respondents. The other five features appear to have played a very limited role in the respondents' entry decisions. Only one of these features was important to more than 20 percent of the respondents.

#### Investigative Question 4

What differences exist among the four year groups' valuation of the importance of the overall compensation package and its features at the time they made their decisions to enter the Air Force?

Contingency table analysis, between the respondents' year group and their responses to the relative importance of the overall compensation package on their decisions to enter the Air Force (survey question 20), failed to find a significant relationship between the two variables at the 0.05 level. The calculated significance level was 0.1360, suggesting that the importance of the compensation package in the

respondents' entry decisions was similar for all four year groups. Table 4.18 shows that the mean responses to survey question 20 clustered around the "Slightly Important" response.

Although there were no significant differences in the importance of the overall compensation package, there were differences within its various features among the year groups. Contingency table analysis between the respondents' year group and the rank orders they assigned each feature identified three statistically significant relationships at the 0.05 level. The three features in these relationships are education opportunities, medical and dental benefits, and retirement benefits. Table 5.6 presents the exact significance levels for each of the features as well as the Cramer's V statistic for the features significant at the 0.05 level. The Cramer's V statistics indicate that the strength of the relationships is relatively weak.

Medians, means, and frequency distributions of the rank orders for the three significant features were examined to identify which year groups were different from the others.

Figure D.12 shows moderate and consistent shifts in the importance of education opportunities between adjacent year groups. The shift is in the direction of decreasing importance for increasing commissioned years of service. The differences among the year groups appear to be a result of the percentages of respondents that identify the feature as being important, rather than the ranks they assigned to it.



TABLE 5.6

Entry Importance -  
Contingency Table Analysis Summary

Feature	Significance Level	Cramer's V
Commissary and Base Exchange	.8139	.23284
Education Opportunities	.0000	
Leave and Holidays	.1541	
Medical and Dental Benefits	.0004	.21121
Monetary Compensation	.5500	.23043
Morale, Welfare, and Recreation	.5100	
Professional Services and Assistance	.8973	
Retirement Benefits	.0001	
Survivor Benefits	.8807	
Tax Advantages	.4394	

Figure D.14 and Table 4.19 show slight but consistent differences in the importance of medical and dental benefits across the four year groups. The general trend is one of decreasing importance as the length of commissioned service increases. The most important difference, however, appears to be between the first year group and the other three groups.

At least 15 percent more respondents in the first year group than in any other year group identified this feature as being important in their entry decision.

The importance of retirement benefits in the respondents' decisions to enter the Air Force exhibited the greatest differences among the year groups. Figure D.18 and Table 4.19 show that the differences are due both to the percentages of respondents reporting the importance of the feature and the values they assigned it. The general trend is of greater importance for respondents with greater lengths of commissioned service.

Further contingency table analyses were conducted to identify variables which explained portions of the relationships between the respondents' year group and the rank distributions of the three compensation features discussed above. Table 5.7 presents the zero-order and first-order partial gamma statistics for each combination of variables examined in a three-way analysis. None of the control variables explained a significant portion of the relationships. In fact, the largest portion explained was 13 percent. It was anticipated that prior enlisted service, entry marital status, the number of children supported at entry, and parents' military background would have explained some of the variation. The inability of the control variables to explain the differences among the year groups suggests that the differences in the importance of education opportunities, medical and dental benefits, and retirement benefits in the entry decision are a

TABLE 5.7

Entry Importance -  
Three-Way Contingency Table Analysis Statistics

Feature	Prior Enlisted Service	Commission Source	Sex	Entry Marital Status	Entry Children	Parents' Military Background
Education Opportunities	.28948 .29161	.28948 .28884	.28828 .27499	.35417 .36330	.29060 .29040	.28828 .30479
Medical and Dental Benefits	.24728 .24166	.24728 .24376	.24934 .21980	.21472 .20689	.25142 .21876	.24934 .24095
Retirement Benefits	-.32746 -.36941	-.32746 -.29571	-.32640 -.30396	-.32051 -.33031	-.32533 -.33904	-.32640 -.32702

result of the time frame in which the respondents entered the Air Force. This could be a result of value changes in society as a whole over the last 20 years. For example, young people 20 years ago may have placed greater importance on long term financial security than young people of today. Placing a greater value on future income would explain the greater importance on retirement benefits.

Several other possible explanations for the differences follow. First, changes to both the education opportunities and retirement benefits have occurred in recent years, as noted in Chapter II. However, the removal of the GI Bill does not seem to account for the trend of increased importance in education opportunities for officers most recently entering the service. In fact, the relationship is in the opposite direction. The change in the retirement benefits could be a possible explanation for the lower importance placed on this feature by the first year group. However, this would not explain the overall trend among all the year groups of increased importance for those with longer commissioned service.

Another possible explanation for the differences among the year groups is that the younger year groups contain many officers who will not remain in the Air Force for twenty or even ten years. It is possible that those most attracted by the retirement benefits are the individuals who eventually make the Air Force a career. This would leave a larger

percentage of individuals who ranked retirement as a major reason for entering the service as years of service increase.

A final explanation could be that the respondents' responses to the identification and ranking of the importance of the compensation features on their decisions to enter the service are biased by their current feelings toward the features. This could stem from an inability of the respondents to recall the factors in their decisions to enter the Air Force. The following two sections also provide evidence which suggests this is a significant explanation for the differences in the features' entry importance among the year groups.

#### Investigative Question 5

How has the importance of the overall compensation package and its individual features changed between the time Air Force officers now in their first, fourth, tenth, and twentieth year of service decided to enter the Air Force and the present?

Table 5.8 shows that the mean responses to the importance of the overall compensation package have increased since the time the respondents decided to enter the service. In addition, the increases in importance are greater for each adjacent year group. This suggests that the importance of the compensation package continues to increase throughout an officer's career.

TABLE 5.8

Comparison of Mean Responses to the Entry and Current Importance of the Overall Compensation Package

Year Group	Entry Importance	Current Importance	Difference
First	4.890	5.012	.122
Fourth	5.041	5.670	.629
Tenth	5.235	6.020	.785
Twentieth	4.796	5.933	1.137

Table 5.9 compares the entry and current relative rank orders of the ten compensation features for each of the year groups. From an inspection of each year group it appears that the relative rank orders have changed little. In fact, 30 of the 40 comparisons show changes of no more than one rank. An examination of features across the year groups, however, identifies several noteworthy trends. First, the relative importance of education opportunities decreased for all year groups. Second, medical and dental benefits increased slightly for each year group. Finally, survivor benefits increased greatly for the twentieth year group.

Since there appears to be little change in the relative importance of most of the features, and since few respondents identified five of the features as being important in their decisions to enter the Air Force, the question of whether these same five features are important in the retention of officers is raised. Rank ordering provides ordinal data. This type of data only identifies the relative importance of the features;

TABLE 5.9

Comparison of Entry and Current  
Rank Orders of the Compensation Features

Features	1st	Year Group		20th
		4th	10th	
Commissary and Base Exchange	6>6	6>6	6>6	6>5
Education Opportunities	1>3	2>5	3>5	3>7
Leave and Holidays	5>4	5>4	5>4	5>6
Medical and Dental Benefits	3>2	4>2	4>3	4>3
Monetary Compensation	2>1	1>1	1>1	2>2
Morale, Welfare, and Recreation	8>8	8>8	8>10	9>10
Professional Services and Assistance	9>7	10>9	9>9	10>9
Retirement Benefits	4>5	3>3	2>2	1>1
Survivor Benefits	10>9	7>7	7>8	7>4
Tax Advantages	7>10	9>10	10>7	8>8

Entry Rank > Current Rank

it does not tell how much more or less important one feature is in relation to another. Thus, the data collected in this research effort prevented further investigation in this study. However, the recommendations in the next chapter address approaches to solving this problem.

### Investigative Question 6

Do Air Force officers in each of the four year groups understand the importance of the compensation package to officers currently entering the Air Force?

A comparison of mean responses in Table 5.10 shows that the respondents from all four year groups attribute a greater importance of the overall compensation package to officers currently entering the Air Force than they did for themselves. In addition, each year group attributed a greater importance of the package to these officers than the first year group themselves attributed to it. Because the first year group just recently entered the Air Force, these findings suggest that the respondents overstated the importance of the compensation package for others. If this general belief were translated into recruitment policy recommendations and actions, it could result in an inefficient use of resources.

TABLE 5.10

Comparison of Mean Responses between  
the Entry Importance of the  
Overall Compensation Package  
Attributed to Others and Self

Year Group	Entry Importance - Others	Entry Importance - Self
First	6.037	4.890
Fourth	6.021	5.041
Tenth	6.113	5.235
Twentieth	6.188	4.796



However, there is another possible explanation for these observations. They may be a reflection of the social desirability response bias discussed in the literature review. In other words, individuals may have responded to the questionnaire according to what they thought was socially acceptable. If this were the case, then the results would suggest that the respondents have actually understated the importance of the overall compensation package for themselves.

Table 4.20 presents the frequency distributions of the features the respondents attributed as being most important to officers currently entering the Air Force among all the features of the compensation package. Table 5.11 presents the frequency distributions of the number one ranked features at the entry decision point for each of the year groups. A cross comparison of the two tables suggests that the respondents are projecting their own values on what they believe to be important for those currently entering the service. Consequently, they do not display a good understanding of what the first year group indicates is important to officers currently entering the Air Force.

#### Additional Analyses

A large percentage of the respondents had prior enlisted service (Table 4.2). And even though Tables 5.3 and 5.7 indicate that enlisted service did not explain the variations in the ranking of the features, the number of years of enlisted service was large enough in many cases for one to suspect

TABLE 5.11

Distribution of Features  
Ranked the Most Important  
for Entry into the Service

Feature	Year Group							
	1st		4th		10th		20th	
	n	%	n	%	n	%	n	%
Commissary and Base Exchange								
Education Opportunities	36	45.0	31	34.1	26	27.1	22	22.7
Leave and Holidays	4	5.0	2	2.2				
Medical and Dental Benefits	5	6.3	6	6.6	3	3.1		
Monetary Compensation	25	31.3	29	31.9	37	38.5	24	24.7
Morale, Welfare, and Recreation					1	1.0		
Professional Services and Assistance								
Retirement Benefits	7	8.8	18	19.8	25	26.0	37	38.1
Survivor Benefits								
Tax Advantages								
No Features Ranked	3	3.8	5	5.5	4	4.2	14	14.4
Missing Data	2		7		2		7	
Sample Size	80		91		96		97	

that individuals could have values more closely aligned to the values of year groups other than the ones to which they belonged. To investigate this possibility, the respondents were regrouped on the basis of their total years of service (commissioned + enlisted). Four new groups consisted of respondents in their first through second, third through fifth, sixth through fourteenth, and fifteenth through thirty-sixth year of total service. Contingency table analyses between these year groups and the rank order the respondents assigned to the compensation features were conducted. Table 5.12 presents significance levels and Cramer's V statistics for the features significant at the 0.05 level. A comparison between Table 5.12 and 5.2 shows that the same seven features are significant at the 0.05 level regardless of the method of grouping the respondents. However, a slight but consistent increase in the significance levels and Cramer's V are realized from grouping the respondents by total years of service. The only exception is a slight decrease in the values for survivor benefits. Also, those features significant at the 0.0000 level remain unchanged. Overall, the variable total years of service appears to explain the differences among respondents better than commissioned years of service.

TABLE 5.12

Current Importance -  
Contingency Table Analysis Summary  
Based on Total Years of Service

Feature	Significance Level	Cramer's V
Commissary and Base Exchange	.0729	
Education Opportunities	.0000	.28168
Leave and Holidays	.0001	.23446
Medical and Dental Benefits	.0018	.21705
Monetary Compensation	.2355	
Morale, Welfare, and Recreation	.0028	.20568
Professional Services and Assistance	.0102	.19558
Retirement Benefits	.0000	.40765
Survivor Benefits	.0002	.23229
Tax Advantages	.2958	

## VI. Conclusions and Recommendations

### Introduction

The purpose of this chapter is to summarize the results of this research effort and to provide recommendations for future research in the areas of recruitment and retention of Air Force personnel.

### Conclusions

1. The overall compensation package did not have a strong influence on the respondents' decisions to enter the Air Force. The mean ranks of the overall importance of the compensation package for the four year groups corresponded to the "Slightly Important" response. This suggests that there were other noncompensatory factors which also influenced the respondents' entry decisions.

2. The overall compensation package was more important to the respondents after entering the Air Force than it was in their decisions to enter. Also, it appears that the importance of the package continues to increase at least up through the twentieth year of commissioned service. At that point, the mean rank of the importance of the overall compensation package corresponded to the "Moderately Important" response. Thus, the compensation package appears to have a greater influence on retention than it has on recruitment. Again though, the mean ranks of importance suggest that

there are other noncompensatory factors which encourage individuals to remain in the Air Force.

3. Within the compensation package, the four year groups consistently ranked education opportunities, leave and holidays, medical and dental benefits, monetary compensation, and retirement benefits among the top five features important in their decisions to enter the Air Force. At least 40 percent of the respondents identified these five features as having had an influence in their entry decisions. The remaining five features were much less frequently identified. And in general, respondents who did identify them, also ranked them relatively low. These five features were commissary and base exchange; morale, welfare, and recreation; professional services and assistance; survivor benefits; and tax advantages. A composite rank order of the ten features is presented in Table 5.5 for each year group.

4. There were statistically significant differences at the 0.05 level among the year groups' ranking of entry importance for three compensation features: education opportunities, medical and dental benefits, and retirement benefits. None of the control variables measured explained a substantial portion of the relationship between the year groups and the ranks assigned to each of the three features. This suggests that the year of entry into the service is an important factor in explaining the differences in the importance of the features to the respondents. However, two other

factors may also have contributed to the differences. First, it is possible that there is a relationship between the entry importance of retirement benefits and the length of time an individual remains in the Air Force. This would explain the greater percentage of respondents in the later year groups who reported that retirement benefits were important at the time they decided to enter the service. Second, it is possible that the respondents projected their current feelings toward the compensation package on their responses to the importance of the features for the time they decided to enter the service. In general, few changes were observed between the entry and current composite rank orders of the compensation features. This could be a result of the respondents inability to recall the factors which influenced them to enter the service.

5. The five features which appeared to be most influential in the respondents' decisions to enter the service were almost as consistently ranked among the top five features in terms of current importance to the respondents. A composite rank order of all ten features is presented in Table 5.1 for each year group.

6. There were statistically significant differences at the 0.05 level among the year groups' rankings of current importance for seven of the compensation features. However, only education opportunities, retirement benefits, and survivor benefits exhibited differences large enough to

warrent practical consideration. One possible explanation for differences among the year groups is differences in their range of experiences and education, which generally increase with maturation. Variables associated with maturation (age, rank, current marital status, and the number of children currently supporting) were substantial contributors to explaining the differences among the year groups. Therefore, efforts to educate Air Force members might enhance retention. One approach is simply to insure that all young officers are educated on the value of their benefits.

7. All four year groups attributed greater importance of the overall compensation package to officers currently entering the Air Force than the first year group attributed to themselves. The four year groups' mean responses clustered around the "Moderately Important" response. In contrast, the entry importance in the first year group's own decision corresponded to "Slightly Important." Thus it appears that the respondents overestimated the importance of the compensation package for the recruitment of officers. Policymakers should therefore exercise caution when examining attitudes and feelings of members already in the Air Force. Recommending increased compensation to enhance recruitment could contribute to ineffective and inefficient results.

8. The frequency with which the four year groups attributed specific features as being the most important to officers currently entering the service also differed



significantly from the frequency of responses the first year group attributed to themselves as being the most important. Again, it appears that the respondents projected the current importance they placed on these features onto officers currently entering the service. This strengthens the conclusion that recruitment policy based on attitudes and feelings of members already in the service could contribute to ineffective and inefficient results.

9. It appears that respondents with prior enlisted service were originally motivated to join the Air Force by the same compensation features as individuals who initially entered the service as commissioned officers. These two groups also ranked the current importance of the compensation package similarly. However, total years of service was a slightly better discriminator than commissioned years of service for distinguishing the importance of the compensation features among individuals.

#### Recommendations

1. Several of the compensation features (commissary and base exchange; morale, welfare, and recreation; professional services and assistance; survivor benefits; and tax advantages) had little influence on the respondents' decisions to enter the Air Force. It is recommended that a study be undertaken to determine whether or not individuals are simply unaware of these features at the time they make their entry decision, or whether these features truly do not provide incentives to join the Air Force.

2. The question of whether the sixth through tenth ranked features (commissary and base exchange; morale, welfare, and recreation; professional services and assistance; survivor benefits; and tax advantages) were of any importance in retaining Air Force officers was previously raised. Recall that there was little change in the composite rankings of these features between the entry decision and the present, and that these five features were reported by only a small percentage of individuals as being important in the entry decision. However, only relative data was obtained for the features' current importance. Therefore, while it could be concluded that the five features had little influence in the respondents' entry decisions, it could not be concluded that they were of little value for retention. It is therefore recommended that a study be conducted to determine whether or not commissary and base exchange; morale, welfare, and recreation; professional services and assistance; survivor benefits; and tax advantages have any significant value in retaining Air Force officers. One approach represents a slight modification to the methodology used in this research effort. In the present effort it was assumed that each feature is important to Air Force officers and therefore required the respondents to rank each feature. A revised approach of requiring the respondents to rank only the features which they indicate are important to them would provide the data necessary to determine if the features are

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A STUDY OF THE RELATIONSHIP BETWEEN YEARS OF  
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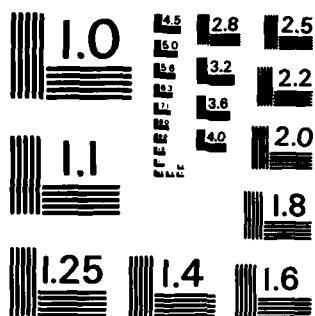
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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

important for retention. A second approach would be to measure the importance of the features with Likert scale responses.

3. For those features determined to have little ability for recruiting and retaining Air Force personnel, it is recommended that a cost/benefit analysis be conducted. The benefits to the government should be at least as great as the costs of maintaining the compensation features. Expenditure of funds for features with low cost/benefit ratios could be more beneficial to both the government and the service members.

4. This research effort identified the relative importance of the compensation features. In other words, it identifies the order in which the current compensation features are valued. Note however, a feature ranked number one does not necessarily mean that respondents desire more of that feature relative to the others. Information on desired changes in the composition of the compensation package would be invaluable in developing efficient and effective strategies for enhancing recruitment and retention. Two approaches are suggested; both are based on the classical economic concept of marginal utility. Application of this concept suggests that individuals can maximize their satisfaction of their income if the last dollar spent on each feature provides the same level of satisfaction or utility. One approach is to measure how Air Force personnel would redistribute

the total value of their compensation package over the compensation features according to their individual needs and desires. A comparison of this distribution with the distribution of actual expenditures would identify features for which Air Force personnel desire increased or decreased benefits within their current total compensation value. A second approach is to measure how Air Force personnel would distribute an increase in their current total compensation value over the features of the package. This would identify the features for which increased benefits would provide the greatest satisfaction for Air Force personnel.

5. This research found that as years of commissioned service increased, respondents were more likely to identify retirement benefits as having been important in their decisions to enter the Air Force. It was therefore suggested that individuals who are initially motivated by retirement benefits are more likely to remain in the service until retirement eligibility than individuals not initially motivated by the benefit. It is recommended that a study similar to this effort be conducted in which the original career intentions of the respondents are measured. The purpose of the study would be to investigate whether or not there is a relationship between initial career intentions and the importance of retirement benefits in the entry decisions of Air Force personnel.

6. Finally, it is recommended that a study similar to this effort be conducted for enlisted personnel. Changes in recruitment and retention policy should consider both groups of personnel to insure that policy which increases effectiveness and efficiency for one group does not do so at the expense of the other.

Appendix A: Military Compensation Package Survey



DEPARTMENT OF THE AIR FORCE  
AIR FORCE INSTITUTE OF TECHNOLOGY (AFIT)  
WRIGHT-PATTERSON AIR FORCE BASE, OH 45433

REPLY TO  
ATTN OF: LS (Capt Cvelbar, AV 785-7212)

1 June 1984

SUBJECT: Military Compensation Package Survey

TO: Dear Fellow Officer

1. Please take the time to complete the attached questionnaire and return it in the enclosed envelope by 12 June 1984.
2. The survey measures your perceptions and attitudes toward the current military compensation package. The data we gather will become part of an AFIT research project and may influence future compensation policy. Your individual responses will be combined with others and will not be attributed to you personally.
3. Your participation is completely voluntary, but we would certainly appreciate your help.

*Larry L. Smith*

LARRY L. SMITH, Colonel, USAF  
Dear  
School of Systems and Logistics

2 Atch

1. Questionnaire
2. Return Envelope

USAF Survey Control No. 84-50, expires 1 Sep 84

AIR FORCE—A GREAT WAY OF LIFE



MILITARY COMPENSATION PACKAGE SURVEY

INSTRUCTIONS: Please answer the following questions by either circling the letter preceding your answer, or filling in blanks as appropriate. Select only ONE RESPONSE to each question unless otherwise instructed.

BACKGROUND INFORMATION

1. What is your current rank?  

a. 2Lt	c. Captain	e. Lt Colonel	g. Other _____
b. 1Lt	d. Major	f. Colonel	
  
2. What YEAR did you first enter the military service? (Do NOT include time in ROTC or service academies).  
 19 \_\_\_\_\_
  
3. How many years of COMMISSIONED military service do you have?  
 \_\_\_\_\_ years
  
4. How many years of PRIOR ENLISTED military service do you have?  
 \_\_\_\_\_ years
  
5. What was your source of commissioning?  

a. OTS	c. Service Academy
b. ROTC	d. Other _____
  
6. To what command are you CURRENTLY assigned?  
 \_\_\_\_\_
  
7. What is your current DUTY AFSC (Air Force Specialty Code)?  
 \_\_\_\_\_

8. What is your sex?

- a. male
- b. female

9. What was your age on your LAST birthday?

\_\_\_\_\_

10. Were one or both of your parents in the military for ten or more years DURING YOUR LIFETIME?

- a. no
- b. yes
- c. do not know

11. What is your CURRENT marital status?

- a. married
- b. never been married, but currently engaged
- c. never been married; not currently engaged
- d. divorced and not remarried
- e. legally separated
- f. widower/widow
- g. other

12. What was your marital status when you ENTERED the Air Force?

- a. married
- b. never been married, but currently engaged
- c. never been married; not currently engaged
- d. divorced and not remarried
- e. legally separated
- f. widower/widow
- g. other

13. How many children do you CURRENTLY support (i.e., provide at least 50 percent of expenses)?

\_\_\_\_\_

14. How many children were you supporting when you ENTERED the Air Force?

\_\_\_\_\_

OPINION QUESTIONS

15. Indicate the level of the STANDARD OF LIVING that the Air Force offers YOU with the current compensation package without any proposed changes.
- a. very high
  - b. high
  - c. slightly high
  - d. neither high nor low
  - e. slightly low
  - f. low
  - g. very low
16. Indicate the degree of FINANCIAL SECURITY that the Air Force offers YOU at this point in time with the current compensation package without any proposed changes.
- a. very high
  - b. high
  - c. slightly high
  - d. neither high nor low
  - e. slightly low
  - f. low
  - g. very low
17. Indicate the degree of FINANCIAL SECURITY that the Air Force offers YOU for the future with the current compensation package without any proposed changes.
- a. very high
  - b. high
  - c. slightly high
  - d. neither high nor low
  - e. slightly low
  - f. low
  - g. very low
18. Please indicate the relative importance the overall military compensation package has among all the reasons for YOUR being an Air Force officer.
- a. very important
  - b. moderately important
  - c. slightly important
  - d. neutral (neither important nor unimportant)v
  - e. slightly unimportant
  - f. moderately unimportant
  - g. very unimportant

19. From the following list, rank order the features of the compensation package in terms of importance to YOU. Place a "1" in the blank next to the feature which is most important. Place a "2" in the blank that is second most important. Continue this procedure until you have placed a number next to all the features. No two features should be given the same ranking.

- a.        COMMISSARY AND BASE EXCHANGE
- b.        EDUCATION OPPORTUNITIES (Technical Training of Job, Off-Duty Education, Tuition Assistance, Air Force Extension Course Institute, GI Bill, Veterans Education Assistance Program, Professional Military Education, Air Force Academy, ROTC, and Air Force Institute of Technology)
- c.        LEAVE AND HOLIDAYS
- d.        MEDICAL AND DENTAL BENEFITS (Base Medical Care, CHAMPUS, Civilian Emergency Care, and Dental Care)
- e.        MONETARY COMPENSATION (Basic Pay, Allowances, Incentive Pay, and Bonuses)
- f.        MORALE, WELFARE, AND RECREATION (On-Base Facilities, Space Available Travel, and Transient Housing)
- g.        PROFESSIONAL SERVICES AND ASSISTANCE (Legal Assistance, Family Services Program, Air Force Aid Society, and VA Home Loans.
- h.        RETIREMENT BENEFITS (Retirement Pay, Disability Pay, Survivor Benefit Plan, and Veteran's Group Life Insurance)
- i.        SURVIVOR BENEFITS (Serviceman's Group Life Insurance, Dependent's Indemnity Compensation, Social Security Survivor Benefits, Death Gratuity, Social Security Death Benefit, Veterans Administration Plot Allowance)
- j.        TAX ADVANTAGES (Federal, State, and Local)
- k.        OTHER \_\_\_\_\_
- l.        OTHER \_\_\_\_\_

20. Please indicate the relative importance the overall military compensation package had among all reasons for YOUR decision to enter the Air Force.

- a. very important
- b. moderately important
- c. slightly important
- d. neutral (neither important nor unimportant)
- e. slightly unimportant
- f. moderately unimportant
- g. very unimportant

21. One or more of the following features of the compensation package may have influenced your decision to enter the Air Force. CIRCLE THE LETTER PRECEDING ONLY THOSE FEATURES WHICH HAD AN INFLUENCE ON YOUR DECISION TO ENTER THE AIR FORCE.
- a. COMMISSARY AND BASE EXCHANGE
  - b. EDUCATION OPPORTUNITIES (Technical Training of Job, Off-Duty Education, Tuition Assistance, Air Force Extension Course Institute, GI Bill, Veterans' Education Assistance Program, Professional Military Education, Air Force Academy, ROTC, and Air Force Institute of Technology)
  - c. LEAVE AND HOLIDAYS
  - d. MEDICAL AND DENTAL BENEFITS (Base Medical Care, CHAMPUS, Civilian Emergency Care, and Dental Care)
  - e. MONETARY COMPENSATION (Basic Pay, Allowances, Incentive Pay, and Bonuses)
  - f. MORALE, WELFARE, AND RECREATION (On-Base Facilities, Space Available Travel, and Transient Housing)
  - g. PROFESSIONAL SERVICES AND ASSISTANCE (Legal Assistance, Family Services Program, Air Force Aid Society, and VA Home Loans.
  - h. RETIREMENT BENEFITS (Retirement Pay, Disability Pay, Survivor Benefit Plan, and Veteran's Group Life Insurance)
  - i. SURVIVOR BENEFITS (Serviceman's Group Life Insurance, Dependent's Indemnity Compensation, Social Security Survivor Benefits, Death Gratuity, Social Security Death Benefit, Veterans Administration Plot Allowance)
  - j. TAX ADVANTAGES (Federal, State, and Local)
  - k. OTHER \_\_\_\_\_
  - l. OTHER \_\_\_\_\_

From the above list, rank order ONLY those features whose corresponding letter you circled ("1" - most important, "2" - second most important, etc.). No two features should be given the same ranking.

22. From the list of all features in Question 21, which one (A-L) do you believe is the most important for people currently entering the Air Force as commissioned officers?
- \_\_\_\_\_

23. Please indicate the relative importance you believe the overall military compensation package has among all the reasons for which people are currently entering the Air Force as commissioned officers.

- a. very important
- b. moderately important
- c. slightly important
- d. neutral (neither important nor unimportant)
- e. slightly unimportant
- f. moderately unimportant
- g. very unimportant

Appendix B:  
Features of the Military  
Compensation Package

Basic Pay

Everyone in the Air Force is authorized basic pay. The exact amount is determined by Congress and varies according to grade and years of service. It increases with promotion and longevity (seniority). It is usually adjusted once a year for increases in the cost of living.

Allowances

Basic Allowances For Quarters (BAQ)

The Air Force provides each member with housing (quarters) or a housing allowance. If a member has dependents, he or she is entitled to BAQ if not assigned family-type government quarters. Members without dependents are entitled to BAQ if government quarters suitable for their grade are not available. If assigned to government quarters, the BAQ withheld pays for rent, utilities, and routine maintenance. A partial BAQ is authorized for members without dependents assigned to government quarters. The exact amount of BAQ varies by grade and whether or not a member has dependents. BAQ is usually adjusted annually along with basic pay.

Basic Allowances For Subsistence (BAS)

The Air Force provides BAS to offset the cost of feeding Air Force members. Enlisted members are entitled to BAS when government dining facilities are not available for members without dependents, or when members with dependents are residing with their dependents. Officers receive a monthly subsistence allowance. BAS is also usually adjusted annually along with basic pay.

Variable Housing Allowance (VHA)

The Air Force pays an additional allowance to members living off base to help offset their housing costs when assigned to areas where average housing costs significantly exceed their BAQ. The VHA is designed to bring actual out-of-pocket housing costs to within 115% of the BAQ for each grade. VHA is adjusted annually to reflect changes in the BAQ rate and the average cost of housing. VHA varies with grade and location.

Station Allowances

Members stationed overseas may be entitled to other allowances to help defray the higher expenses of living overseas.

Temporary Lodging Allowances (TLA). This is designed to help pay for lodging and eating expenses when arriving or departing PCS [Permanent Change of Station]. TLA is normally limited to 10 days for departure and, in ten day increments, up to 60 days for arrival.

Housing Allowance (HA). This is to help offset the cost of housing when living off base. If the local housing costs significantly exceed BAQ, HA may be authorized.

Cost of Living Allowance (COLA). When the average cost of living (excluding housing) is greater than in the United States at an overseas station, COLA may be authorized. COLA is adjusted periodically to reflect prices and the applicable foreign exchange rate.

#### Family Separation Allowance (FSA)

This is paid to members with dependents who are forced to reside away from their family due to official orders. There are two types. A member may qualify for one or both.

FSA-1. Payable to members stationed outside the CONUS, Alaska, or Hawaii, and not furnished government quarters. It is payable at the without dependents rate of BAQ for the applicable grade. It is designed to compensate the member for maintaining two residences.

FSA-2. Payable to members separated from their dependents for more than 30 days (PCS or TDY). Its purpose is to pay for minor home repair and increased child care in the member's absence.

#### Clothing Monetary Allowance

Enlisted members receive an allowance for the repair and maintenance of uniforms. The rate depends on time in service.

#### Incentive Pay

##### Aviation Career Incentive Pay (ACIP)

Pilots, navigators, and flight surgeons on flight orders and medically qualified receive ACIP. The rate varies, depending upon years of aviation service and total years of service.

##### Hazardous Duty Incentive Pay (HDIP)

Members assigned to certain jobs qualify for HDIP. These include nonrated members required to participate in regular aerial flight, parachute jumping, explosives demolition, experimental stress duty, handling toxic missile fuel, working with dangerous viruses in laboratories, and leprosarium duty.

##### AWACS Air Weapons Controllers

Officers performing duties as an AWACS weapons controller are eligible for incentive pay. The pay generally

increases with grade and years of weapons controller experience through 0-6 and 18 years' experience.

#### Federal Tax Advantage

The allowances members receive are not subject to federal income tax. These include BAQ, BAS, VHA, HA, COLA, and FSA. If allowances were taxable, more income tax would be withheld from each paycheck. This savings represents additional income, since each member would have to earn more money to pay the taxes due and have the same amount left over to spend.

#### Medical and Dental Benefits

##### Medical Care

Members and their families (on a space available basis) are eligible for medical care at any military medical facility. If the condition is critical and can't be treated locally, the Air Force will transport the patient to a military regional medical center where proper care is available. The only cost may be a daily charge for subsistence if admitted to the hospital. This small fee pays for government meals while hospitalized. It is adjusted each fiscal year. All outpatient work (visits to the doctor, laboratory work, etc.) and prescription medications are free when obtained through a military medical facility.

##### CHAMPUS

If a member's family chooses to use medical facilities in the local community, the Civilian Health and Medical Program of the Uniform Services (CHAMPUS) is available. For non-emergency services, a statement of nonavailability may be required if the family resides within 40 miles of a military medical facility. After paying an annual deductible of \$50 (\$100 per family) each fiscal year, CHAMPUS will pay 80% of reasonable charges for outpatient care and prescription medications. If hospitalized, the family member must pay the equivalent of the military medical facility subsistence fee per day or \$25, whichever is greater. CHAMPUS will pay the rest of reasonable inpatient hospital charges.

##### Emergency Care

In an emergency, both the member and family are eligible for funded emergency medical care at civilian facilities. For members, the Air Force will pay the entire cost of medical treatment. For families, CHAMPUS will pay according to the schedule described above. A statement of nonavailability is not required for emergency medical treatment. For emergency medical care administered at military facilities, only the subsistence fee is charged if admitted to the hospital.



### Dental Care

Each member is entitled to free dental care at Air Force expense. This includes routine dental examinations, teeth cleaning, X-rays, fillings, restoration work and even braces if necessary. For dependents, only limited dental care is available within the U.S. Families may receive emergency dental or oral care; diagnostic X-rays (if ordered by a civilian dentist); and fluoride treatment for children under 12 during the birth month of the member. Overseas, dental care may be authorized for family members if adequate local care is not available. CHAMPUS pays for dental care only when required to correct a medical or surgical problem not primarily dental in nature.

### Commissary and Base Exchange Benefits

#### Commissary

The Air Force Commissary Service (AFCOMS) operates retail stores at most Air Force installations. AFCOMS pays for employees' salaries and merchandise transportation. Goods are sold at cost with a 4% surcharge added to help pay for commissary construction and renovation. A commissary must offer at least a 20% average savings compared to local supermarkets to continue operating.

#### Base Exchange

The Army and Air Force Exchange Service (AAFES) operates the base exchange (BX) system. Except for promotional sales, the selling price of merchandise in the BX must cover the cost of goods, employees' salaries, BX construction and renovation, and a profit. The Morale, Welfare and Recreation (MWR) program is funded with profits from the BX system. A 1981 survey by the A. C. Nielson Company found an average savings of 20.6 percent on 300 brand name items at the BX. An additional savings is realized since BX patrons don't pay state or local sales tax on purchases.

### Survivor Benefits

#### Servicemen's Group Life Insurance (SGLI)

Low cost SGLI term insurance is available to every Air Force member. It comes in increments of \$5000, up to a maximum of \$35,000.

#### Dependent's Indemnity Compensation (DIC)

When an Air Force member dies in the line of duty (this includes off duty and leave time), DIC is payable to widows, widowers, and children. This protection is equivalent to a substantial amount of additional life insurance. The rate is based on the member's grade at the time of death. Payments to widows/widowers are for the lifetime of the recipient, or until remarriage. Outside income does not affect payments. An additional amount of DIC is authorized

for children under 18 (up to 23 if a full-time student). Children may continue to collect DIC, even if the surviving parent dies or remarries.

#### Social Security Survivor Benefits

If a member dies, the family may be eligible for Social Security Survivor payments. The surviving spouse can collect as long as there are children under the age of 16 at home, and start again after age 60 (or later). Children also receive direct payments until age 16 (or 18 if a full-time student). The exact amount of the payments will vary with the average earnings of the deceased parent.

#### Death Gratuity

If a member dies on active duty, the family is entitled to a lump sum payment equal to six months pay (but not allowances). The minimum payment is \$800 and the maximum payment is \$3000. With the current pay rates, all families would receive \$3000.

#### Social Security Death Benefit

Families of Air Force members are eligible to receive a lump sum payment of \$225 if the member dies.

#### Veterans Administration Plot Allowance

Families are also eligible for \$150 for plot or interment allowance if the member is not buried in a national cemetery. A free headstone and flag are available too.

### Retirement Benefits

#### Retirement Pay

Air Force members may retire after 20 years of active duty. Individuals usually retire in their current grade. Officers must serve at least three years in grade in order to retire in that grade. Officers with prior enlisted time must serve ten years as a commissioned officer to retire as an officer. Enlisted personnel who hold a temporary grade higher than their current grade retire in their current grade. After a total of 30 years' service (active and retired), they advance to the highest grade satisfactorily held and their retirement benefit is adjusted accordingly.

Retirement pay is computed as a percentage of basic pay. Two and a half percent of basic pay for each year of active duty is allowed. Retirement pay thus varies from 50 percent of basic pay for 20 years' service to 75 percent of basic pay for 30 years' service. [Members who joined the Air Force on or after 8 September 1980 base their retirement pay on their highest three earning years rather than on final basic pay.]

Retirement pay continues for the life of the member. Currently, annual cost of living adjustments are made to reflect the effects of inflation. Retirement pay is subject to federal and possibly state income taxes.

### Disability Retirement

Members retired with a certified service connected disability may elect to have their retirement pay computed by multiplying their disability rating times their basic pay. If a member was on active duty prior to 25 September 1975, or if it is a combat related disability, all or part of the retirement pay may be excluded from federal taxation.

### Survivor Benefit Plan (SBP)

The SBP is insurance offered by the government to guarantee a continuing income to beneficiaries after a retiree's death. The retiree pays for the insurance through deductions from the monthly retirement check. The cost varies with the type of beneficiary named and the amount of income guaranteed.

If an active duty member eligible for retirement (over 20 years' service) dies on active duty, the SBP will pay the spouse the difference between the DIC payments and the maximum SBP annuity the spouse would have been eligible for if the member had been retired. This extra protection is provided at no cost to the member.

### Veteran's Group Life Insurance (VGLI)

After release from active duty or retirement, members are eligible for low cost VGLI five year nonrenewable term insurance. It is issued in multiples of \$5000 up to \$35,000 maximum.

### Bonuses

Selective Reenlistment Bonuses (SRB) are offered to many enlisted personnel. The availability and amount of the bonus depends upon the career field and the member's years of service.

Officers in scientific and engineering career fields may also qualify for a continuation bonus.

### Education Opportunities

#### Technical Training

Valuable training is provided to prepare members for a wide variety of jobs. Many of the skills learned are directly transferable to civilian jobs.

#### On-the-Job Training (OJT)

Continuation training is provided to enhance their skills and prepare for promotion and increased responsibility.

#### Community College of the Air Force (CCAF)

The CCAF will combine credit for Air Force sponsored training, work experience, and civilian school courses to enable enlisted members to earn accredited associate degrees.

#### **Off-Duty Education**

Over 400 colleges and universities offer studies, including occupational certificates, associate, bachelor, and graduate degree programs through base Education Centers worldwide.

#### **Tuition Assistance**

The Air Force can pay up to 75% of tuition for off-duty education with accredited schools.

#### **Air Force Extension Course Institute (ECI)**

Free enrollment is available in self-study versions of Air Force technical and professional courses.

#### **GI Bill/Veterans Education Assistance Program (VEAP)**

The GI Bill is available for members who entered the Air Force before January 1, 1977. For other members, the Air Force (through VEAP) will contribute \$2 for every \$1 that is saved in an education account, up to a total member contribution of \$2700 (\$8100 total available for education).

#### **Professional Military Education (PME)**

The Air Force provides PME in residence, through seminars, and by correspondence to polish leadership, management, and other professional skills.

[Other education opportunities include the United States Air Force Academy, ROTC programs, and the Air Force Institute of Technology.]

#### **VA Home Loans**

After six months of active duty, members may be eligible for home loans through the Veterans Administration. This benefit is not tied to GI Bill eligibility.

#### **Leave and Holidays**

All members are eligible for 30 days of paid vacation each year. In addition, federal holidays are celebrated by Air Force personnel, except for those on mission-essential duty or standby.

#### **Space Available Travel**

Members are eligible for free space available travel aboard military aircraft worldwide. Families are eligible for space available travel outside the CONUS. A \$10 administration fee is charged for trips outside the CONUS.

#### **Legal Assistance**

The base Legal Assistance Officer will assist members with wills, power of attorney, sale of homes, and provide advice on domestic relations problems, contracts, civil rights, and tax problems.

#### Transient Housing/FAMCAMPs

Many bases have family transient quarters that are available to members and their families while traveling on leave or official orders. There are 40 FAMCAMP campgrounds at bases across the country. The rate for both types of facilities are generally far below comparable commercial facilities.

#### On Base Facilities

Bases offer a wide variety of activities conveniently located and at prices substantially below the cost off-base. [These include] theater, bowling alley, golf course, hobby shops, aero club, library, child care center, open messes, recreation center, and sports and recreation programs.

#### Family Services Program

Family Services can loan household items to ease moving in and out. They also maintain information on bases worldwide and provide incoming families with information kits on their new base.

#### Air Force Aid Society

The purpose of the Air Force Aid Society is to give financial assistance to members and their families in emergency situations. Aid may be an outright grant, no-interest loan, or a combination, depending upon the circumstances.

Appendix C:  
Listing of Raw Data  
and Key for Deciphering the Data

Data File Column Number	Description	Question Number	Values and Responses
1	Rank	1	1 - 2Lt 2 - 1Lt 3 - Captain 4 - Major 5 - Lt Colonel 6 - Colonel
2-3	Year First Entered the Service	2	Last Two Digits of the Year
4-5	Years of Commissioned Service	3	Number of Years
6-7	Years of Enlisted Service	4	Number of Years
8	Source of Commissioning	5	1 - OTS 2 - Rotc 3 - Service Academy 4 - Other
9-10	Command of Assignment	6	1 - AFLC 2 - AFSC 3 - ATC 4 - SAC 5 - TAC 6 - Hq AF 7 - MAC 8 - AU 9 - Space 10 - USAFE 11 - US Central 12 - AFCC 13 - DNA

Data File Column Number	Description	Question Number	Values and Responses
9-10	Command of Assignment (Continued)	6	14 - DMA 15 - DCA 16 - AFOTEC 17 - ESC 18 - AFOSI 19 - Armed Forces Staff 20 - USAFA 21 - DLA 22 - AFALC 23 - Air Force Staff 24 - AFAA 25 - Atlantic 26 - AFMEA 27 - MTMC 28 - OSD 29 - Joint Deployment Agency 30 - PACAF 31 - AD 32 - AFELM 33 - SGAS 99 - Missing
11-12	Duty AFSC	7	First Two Digits of AFSC Exceptions: 19 - OOX 96 - Missing
13	Sex	8	1 - Female 2 - Male 9 - Missing
14-15	Age	9	Number of Years
16	Parents' Military Background	10	1 - No 2 - Yes 9 - Missing

Data File Column Number	Description	Question Number	Values and Responses
17	Current Marital Status	11	1 - Married 2 - Never Been Married, But Currently Engaged 3 - Never Been Married; Not Currently Engaged 4 - Divorced and Not Remarried 5 - Legally Separated 6 - Widower/Widow 7 - Other 9 - Missing
18	Entry Marital Status	12	1 - Married 2 - Never Been Married, But Currently Engaged 3 - Never Been Married; Not Currently Engaged 4 - Divorced and Not Remarried 5 - Legally Separated 6 - Widower/Widow 7 - Other 9 - Missing
19	Current Number of Children	13	Number of Children 9 - Missing
20	Entry Number of Children	14	Number of Children 9 - Missing



Data File Column Number	Description	Question Number	Values and Responses
21	Standard of Living	15	1 - Very Low 2 - Low 3 - Slightly Low 4 - Neither High Nor Low 5 - Slightly High 6 - High 7 - Very High 9 - Missing
22	Current Financial Security	16	1 - Very Low 2 - Low 3 - Slightly Low 4 - Neither High Nor Low 5 - Slightly High 6 - High 7 - Very High 9 - Missing
23	Future Financial Security	17	1 - Very Low 2 - Low 3 - Slightly Low 4 - Neither High Nor Low 5 - Slightly High 6 - High 7 - Very High 9 - Missing

Data File Column Number	Description	Question Number	Values and Responses
24	Current Importance of Compensation Package	18	1 - Very Unimportant 2 - Moderately Unimportant 3 - Slightly Unimportant 4 - Neutral 5 - Slightly Important 6 - Moderately Important 7 - Very Important 9 - Missing
25-26	CURRENT IMPORTANCE -Commissary and Base Exchange	19a	Rank (1 through 10)
27-28	-Education Opportunities	19b	1 - Most Important
29-30	-Leave and Holidays	19c	10 - Least Important
31-32	-Medical and Dental Benefits	19d	99 - Missing
33-34	-Monetary Compensation	19e	
35-36	-Morale, Welfare, and Recreation	19f	
37-38	-Professional Services and Assistance	19g	
39-40	-Retirement Benefits	19h	
41-42	-Survivor Benefits	19i	
43-44	-Tax Advantages	19j	
45-46	-Other1	19k	1 - Job Security
47-48	-Other2	19l	2 - Experience
			3 - Flying
			4 - Job Satisfac- tion
			5 - Travel
			6 - Patriotism
			7 - Prestige
			8 - Professional Status
			9 - Job Itself

Data File Column Number	Description	Question Number	Values and Responses
49	Entry Importance of Compensation Package	20	1 - Very Unimportant 2 - Moderately Unimportant 3 - Slightly Unimportant 4 - Neutral 5 - Slightly Important 6 - Moderately Important 7 - Very Important 9 - Missing
	ENTRY IMPORTANCE		
50-51	-Commissary and Base Exchange	21a	Rank (1 through 10)
52-53	-Education Opportunities	21b	1 - Most Important
54-55	-Leave and Holidays	21c	10 - Least Important
56-57	-Medical and Dental Benefits	21d	99 - Missing
58-59	-Monetary Compensation	21e	
60-61	-Morale, Welfare, and Recreation	21f	
62-63	-Professional Services and Assistance	21g	
64-65	-Retirement Benefits	21h	
66-67	-Survivor Benefits	21i	
68-69	-Tax Advantages	21j	1 - Job Security
70-71	-Other1	21k	2 - Experience
72-73	-Other2	21l	3 - Duty to Country 4 - Draft 5 - Travel 6 - Flying 7 - Patriotism 8 - Career 9 - Job Satisfac- tion 10 - Deferred Pay- ment of Loan

Data File Column Number	Description	Question Number	Values and Responses
74-75	Most Important Feature for Officers Currently Entering the Air Force	22	1 - Commissary and Base Exchange 2 - Education Opportunities 3 - Leave and Holidays 4 - Medical and Dental Benefits 5 - Monetary Compensation 6 - Morale, Welfare, and Recreation 7 - Professional Services and Assistance 8 - Retirement Benefits 9 - Survivor Benefits 10 - Tax Advantages 99 - Missing
76	Entry Importance for Officers Currently Entering the Air Force	23	1 - Very Unimportant 2 - Moderately Unimportant 3 - Slightly Unimportant 4 - Neutral 5 - Slightly Important 6 - Moderately Important 7 - Very Important 9 - Missing
77-79	Identification Number	NA	Three Digit Number (001-386)



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Appendix D: Frequency Distributions of Rank Orders of  
Current and Entry Importance of the Compensation Features

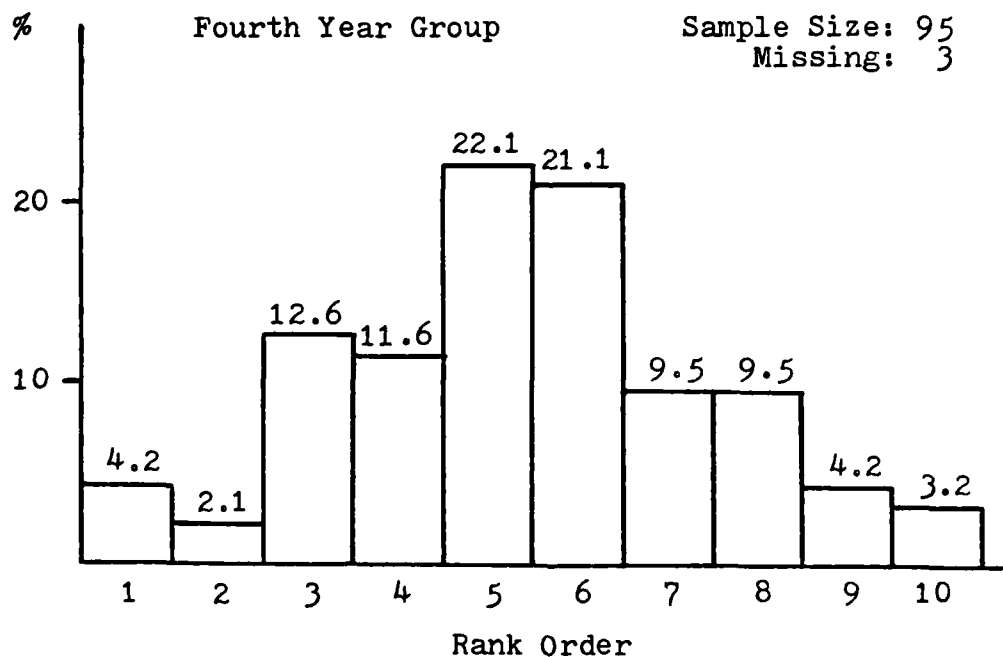
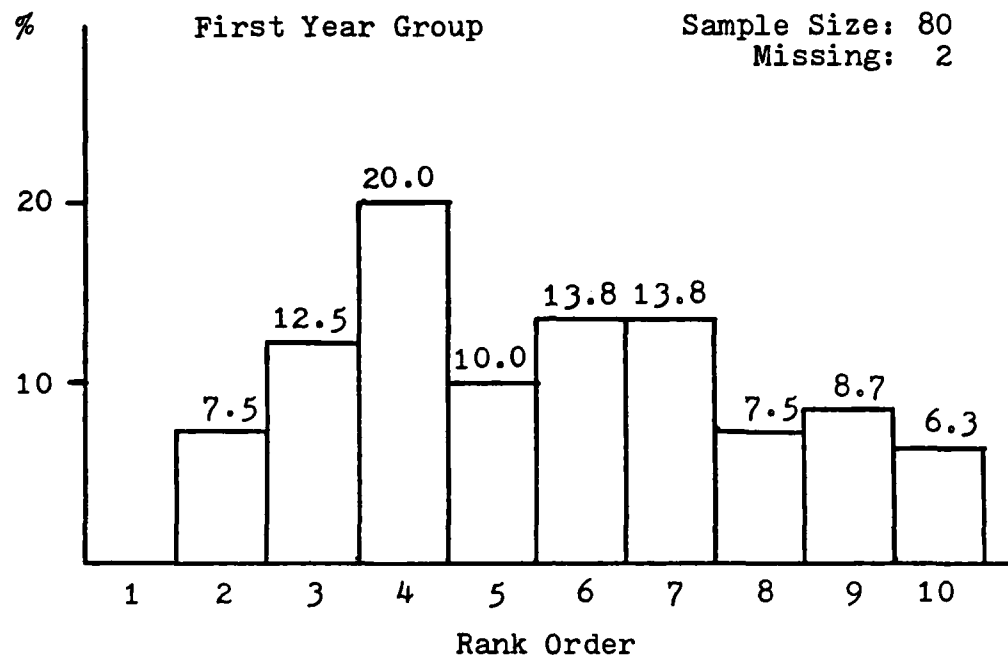


FIGURE D.1

Current Importance -  
Commissary and Base Exchange



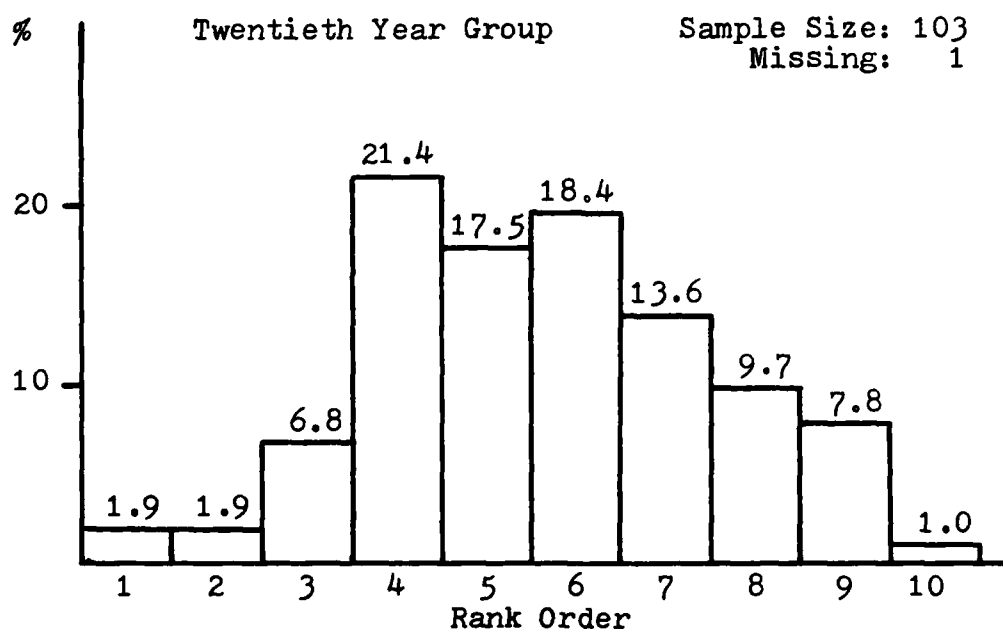
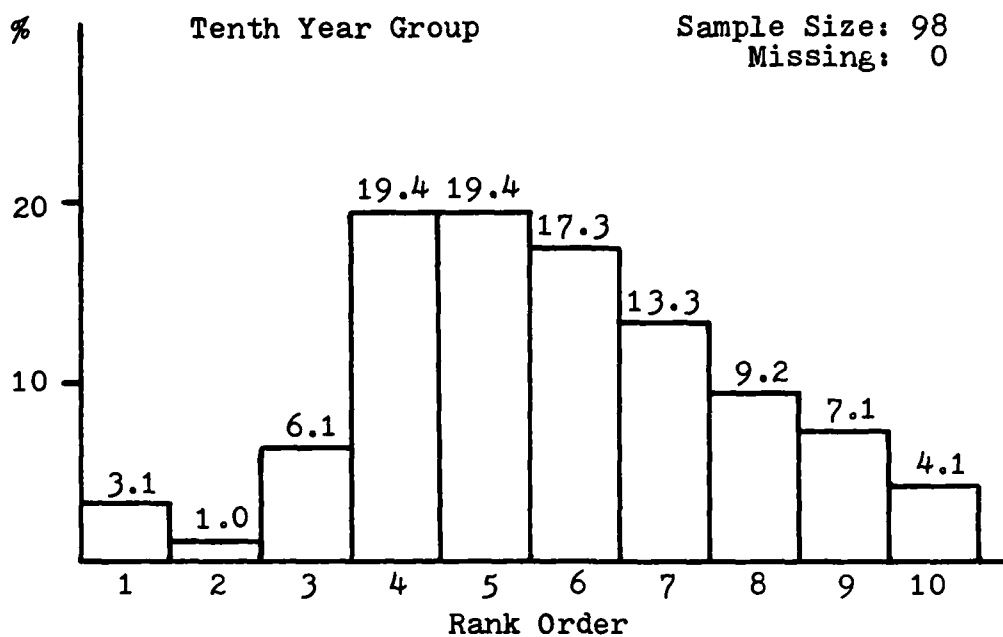


FIGURE D.1  
(Continued)

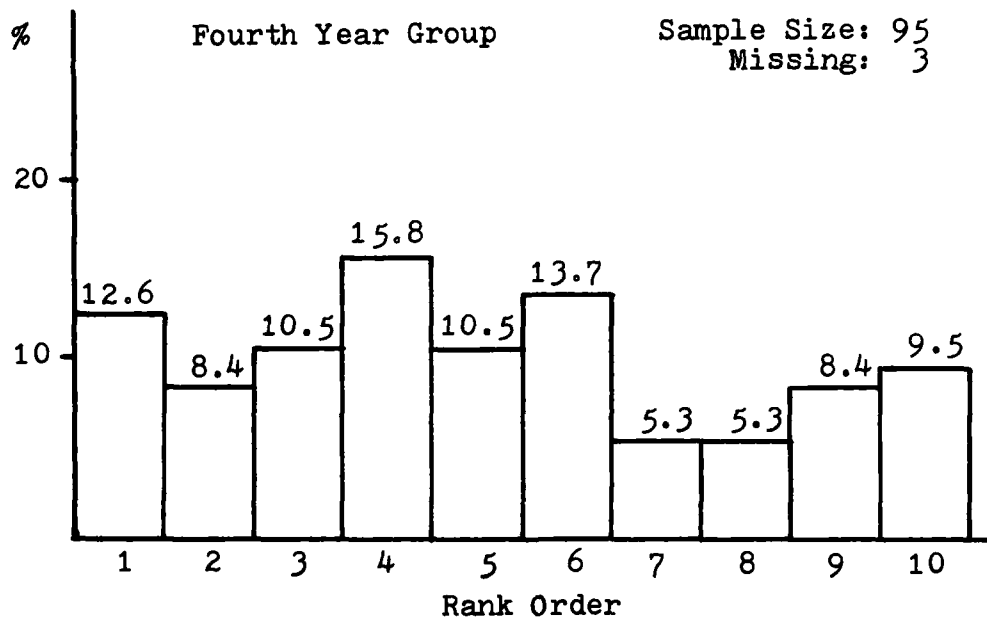
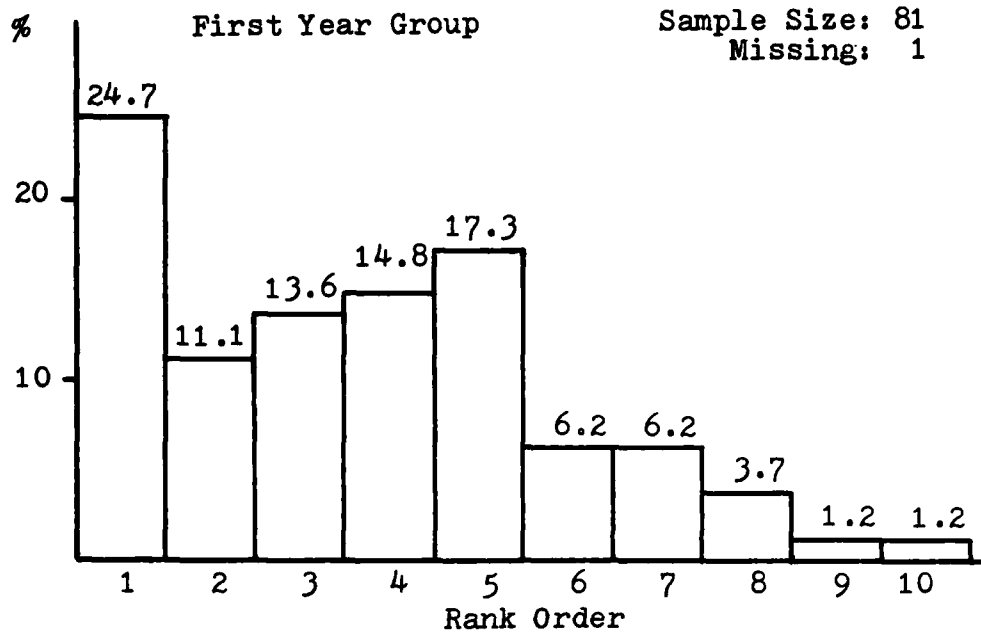


FIGURE D.2

Current Importance -  
Education Opportunities

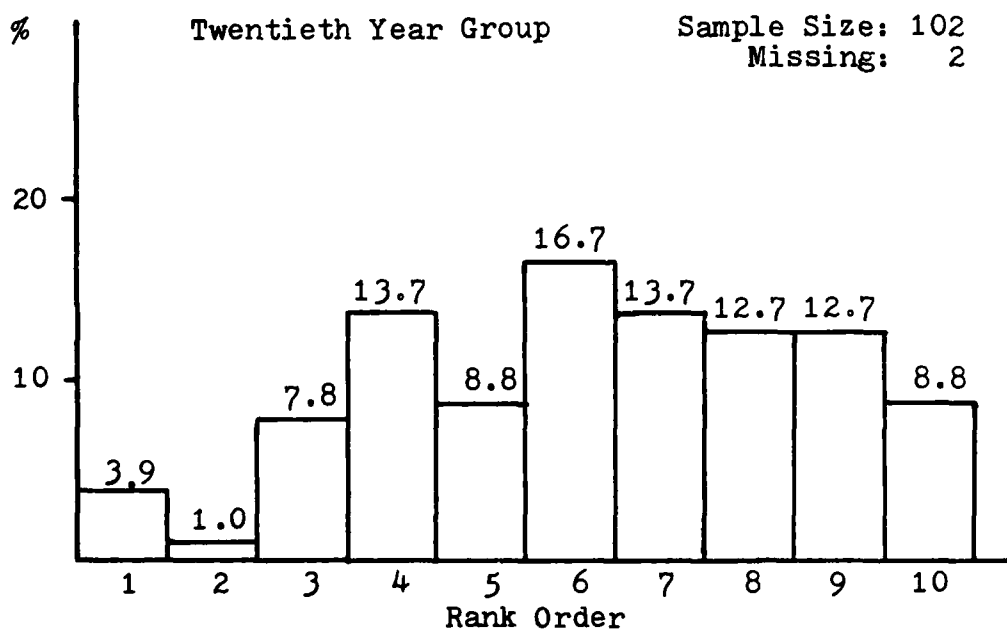
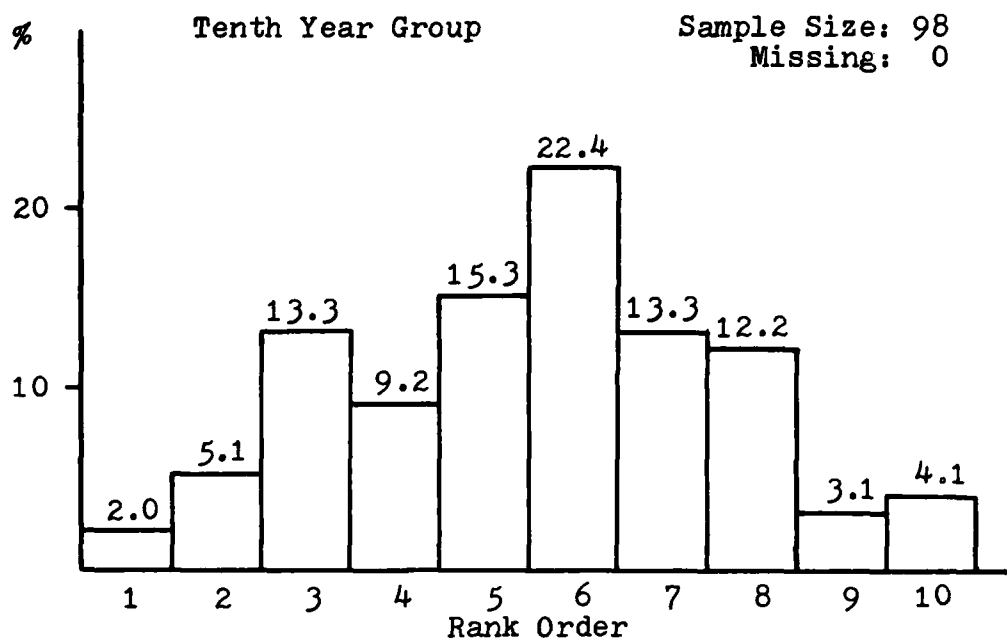


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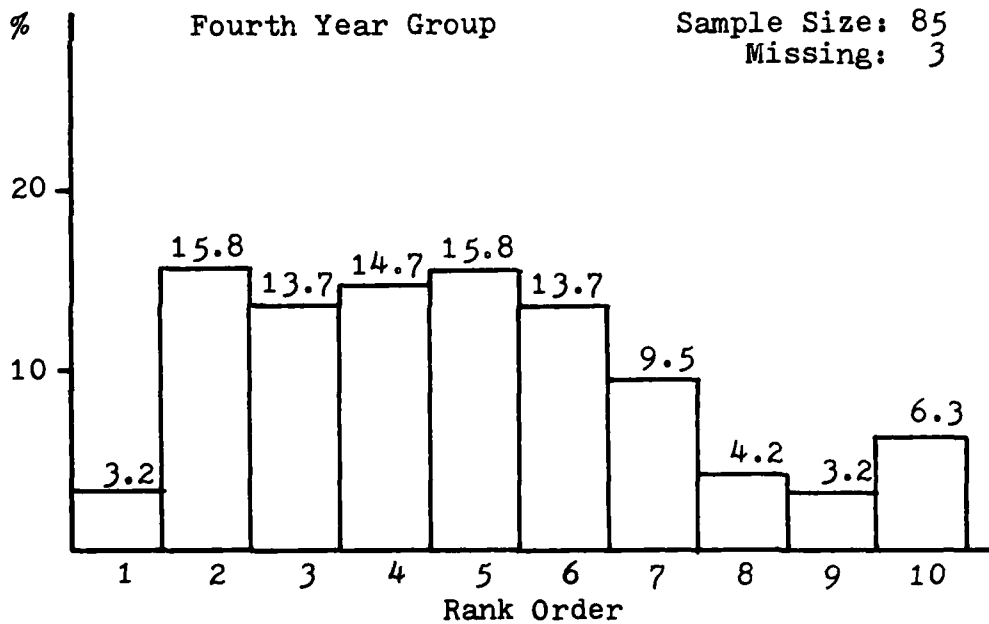
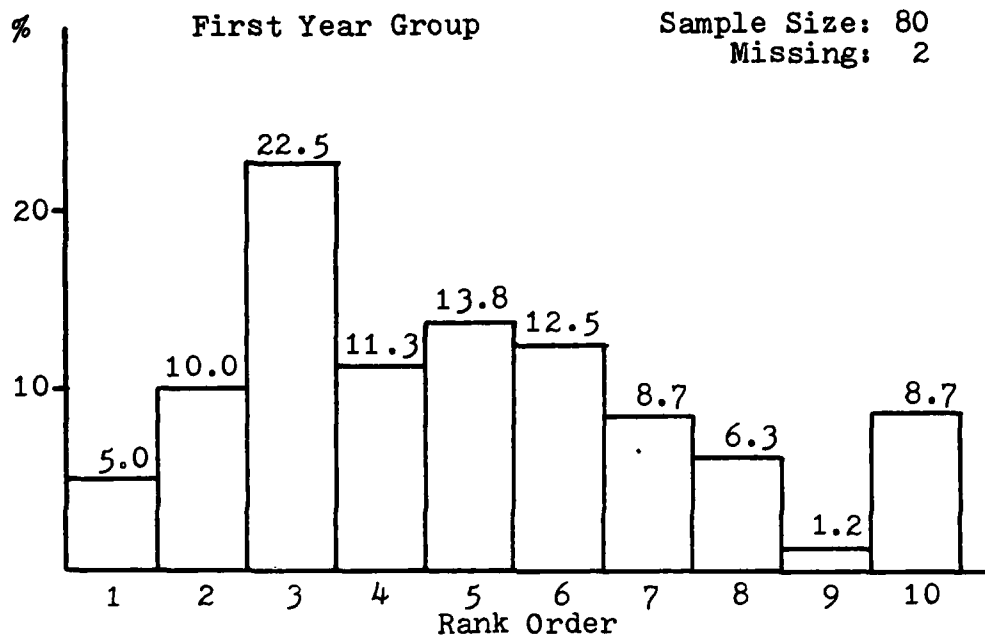


FIGURE D.3

Current Importance -  
Leave and Holidays

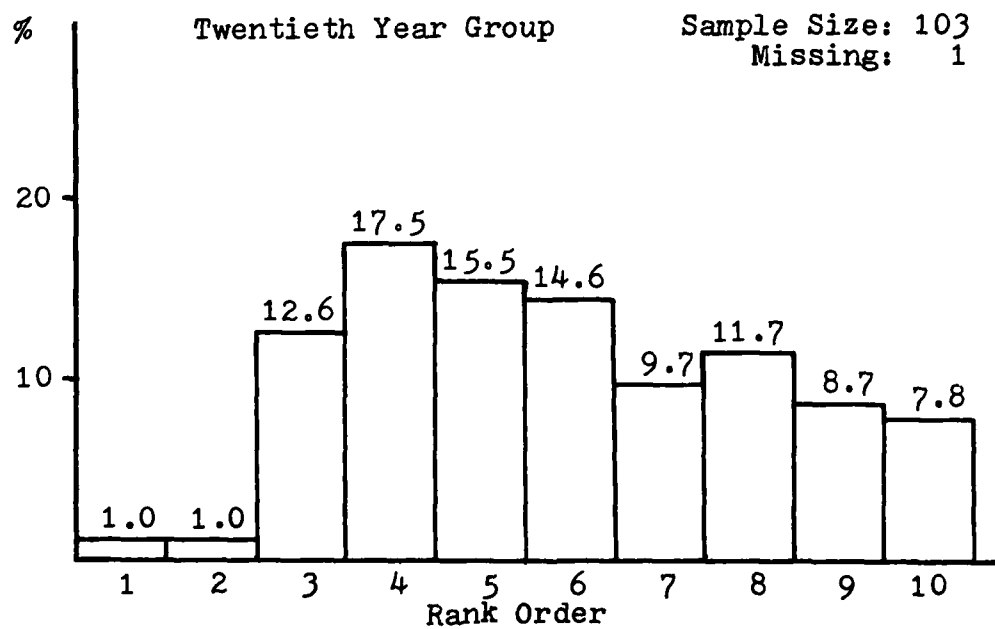
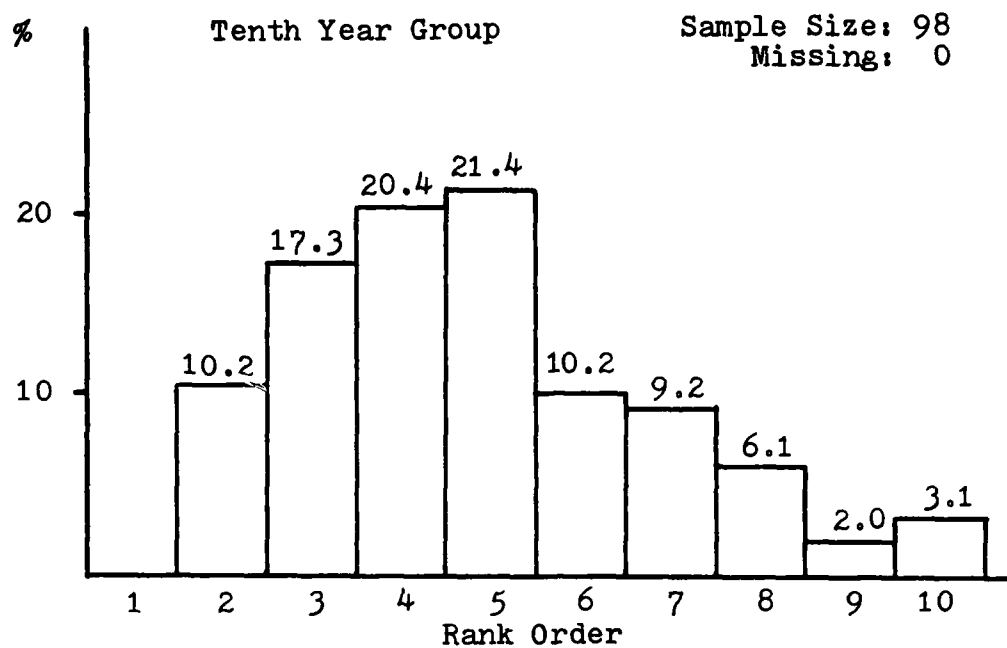


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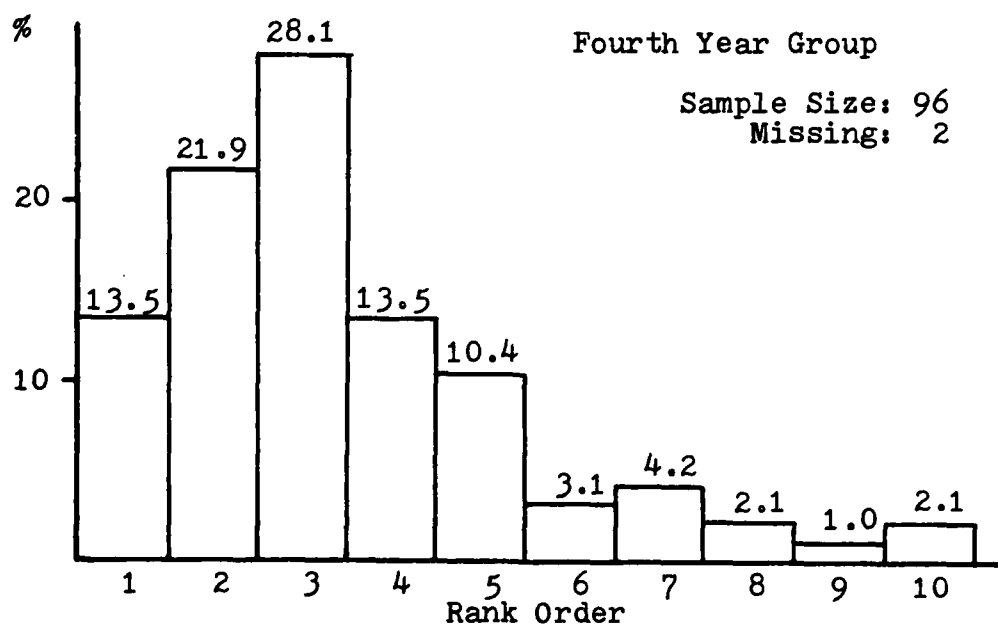
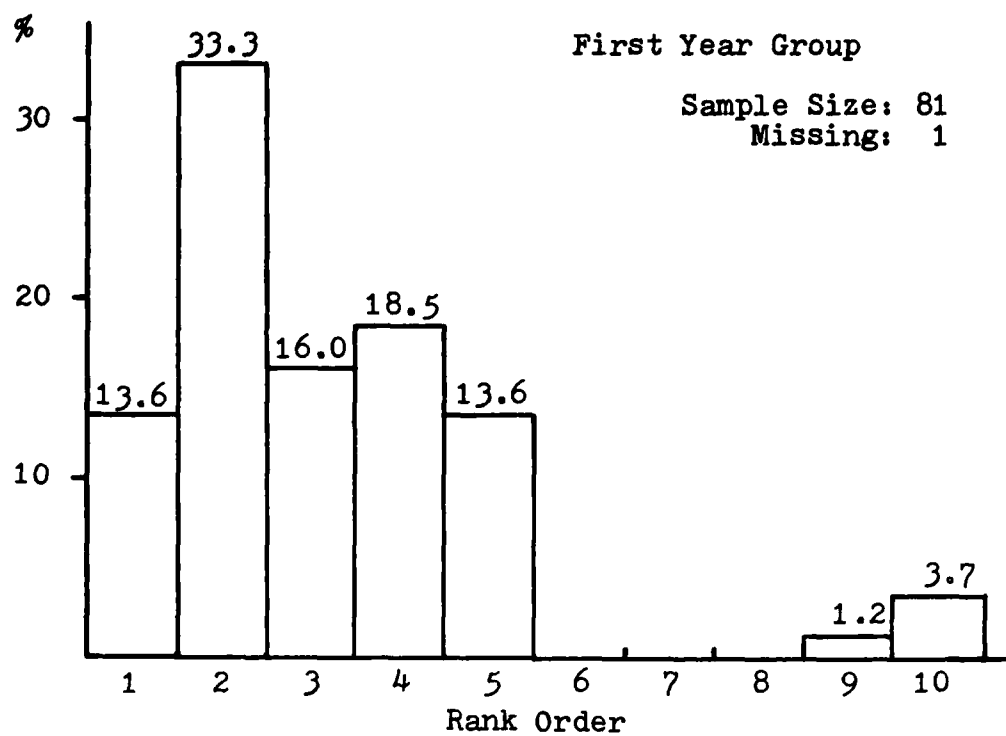


FIGURE D.4

Current Importance -  
 Medical and Dental Benefits

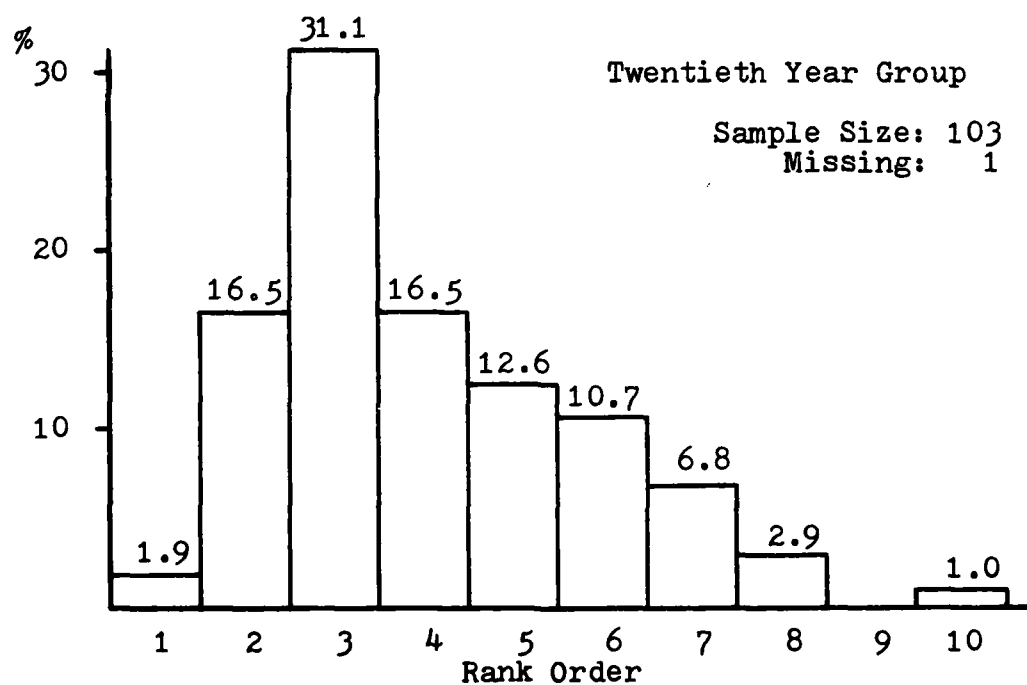
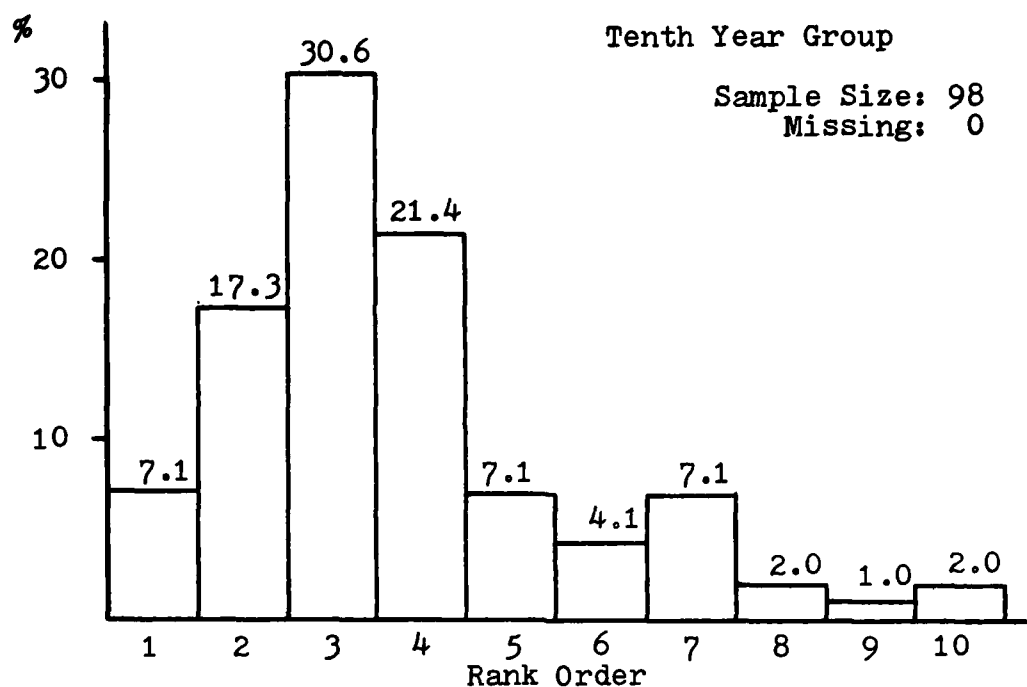


FIGURE D.4  
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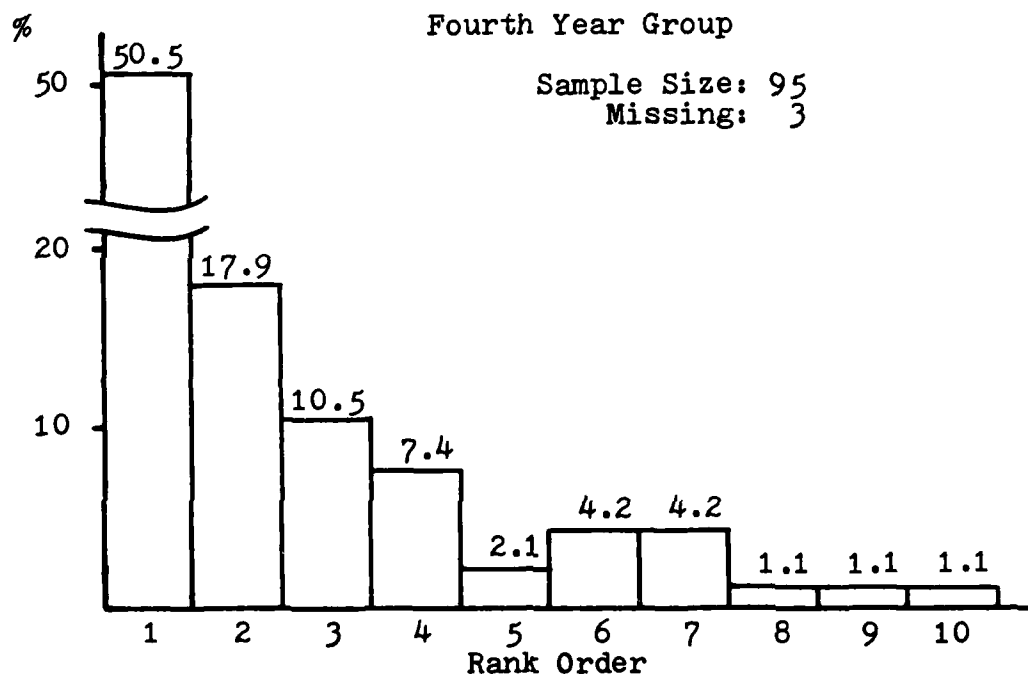
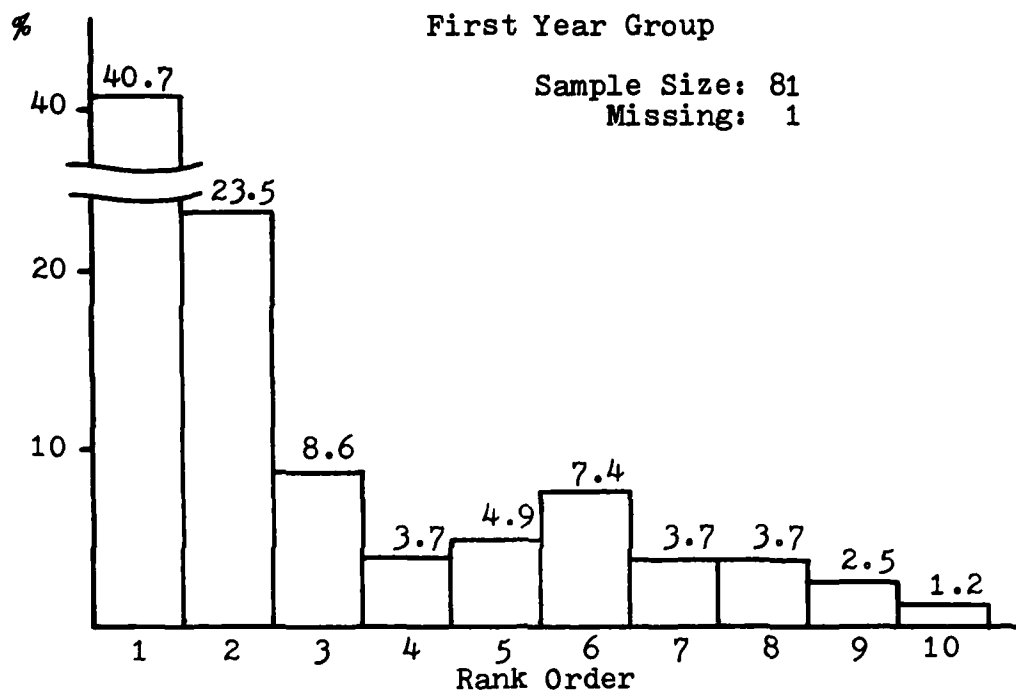


FIGURE D.5

Current Importance - Monetary Compensation



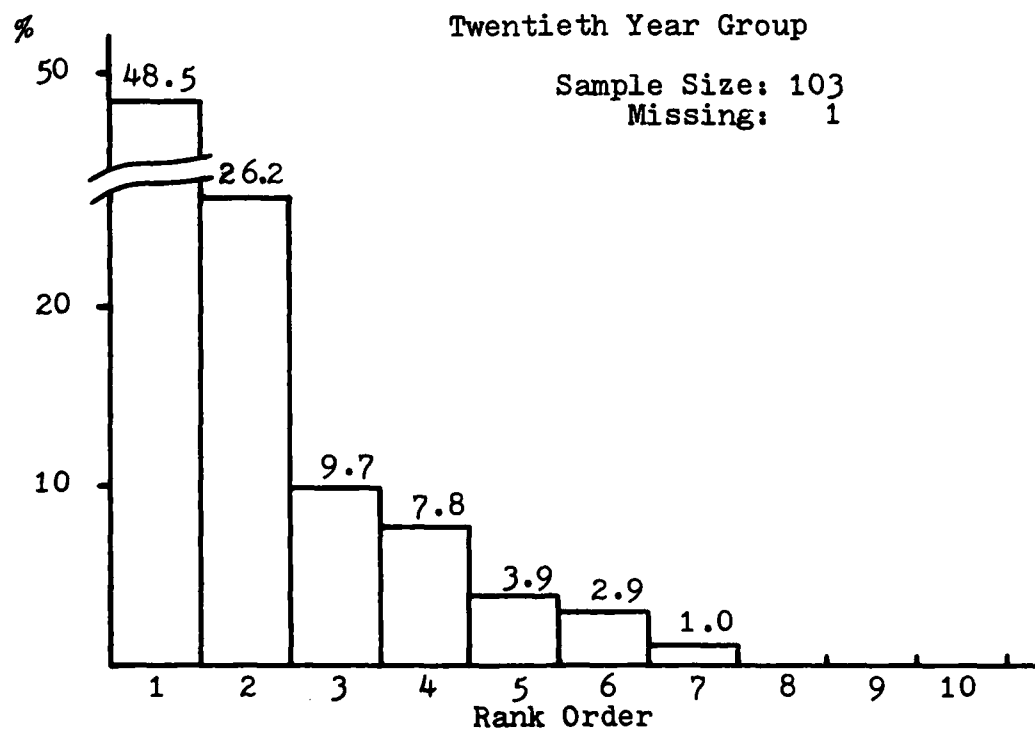
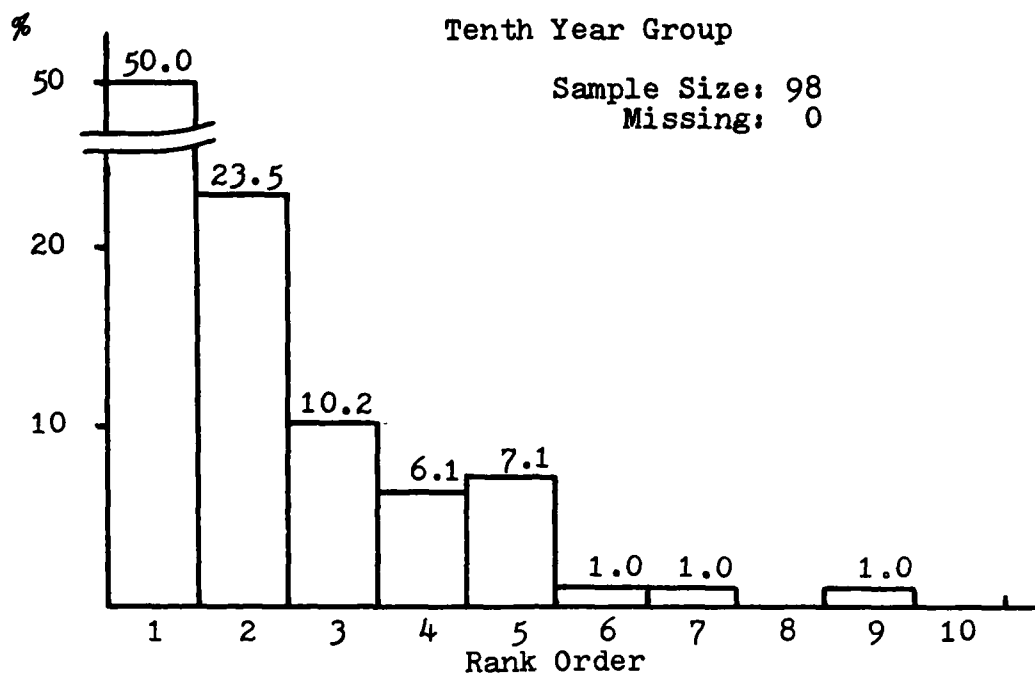


FIGURE D.5  
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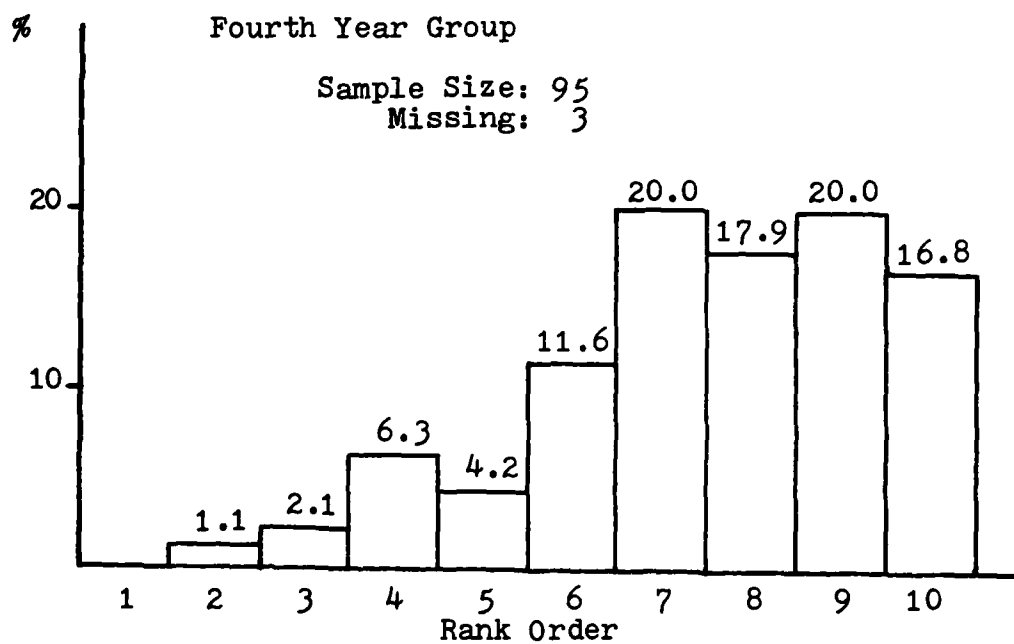
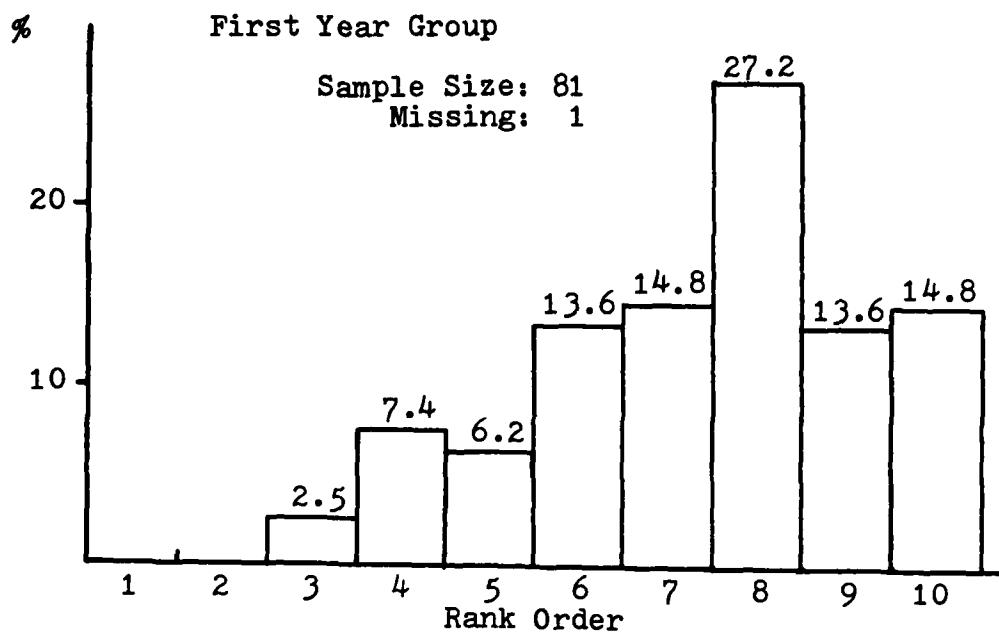


FIGURE D.6

Current Importance -  
Morale, Welfare, and Recreation

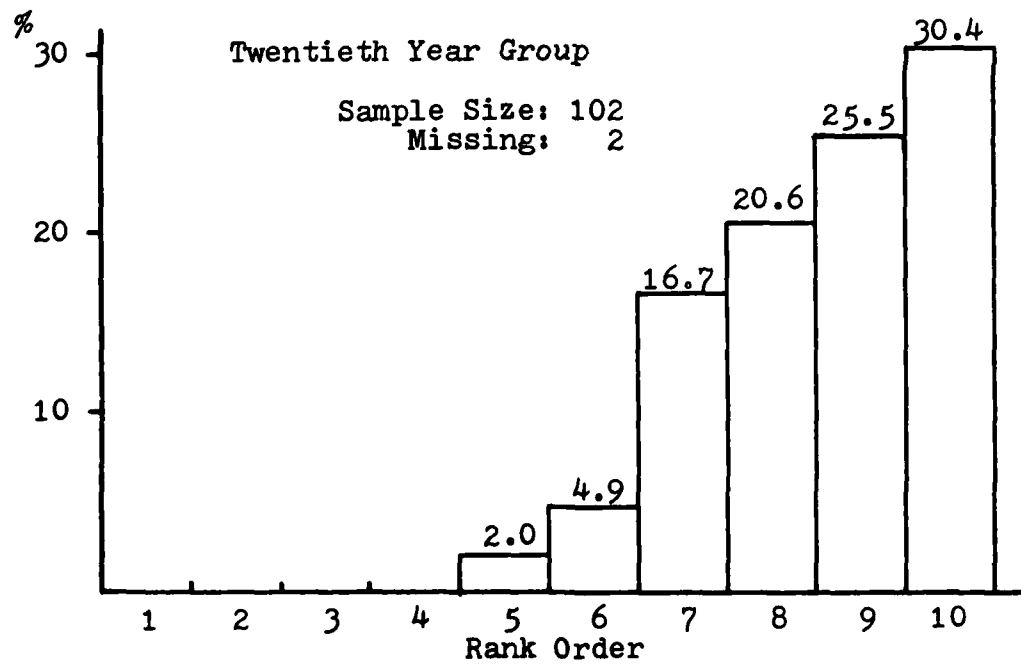
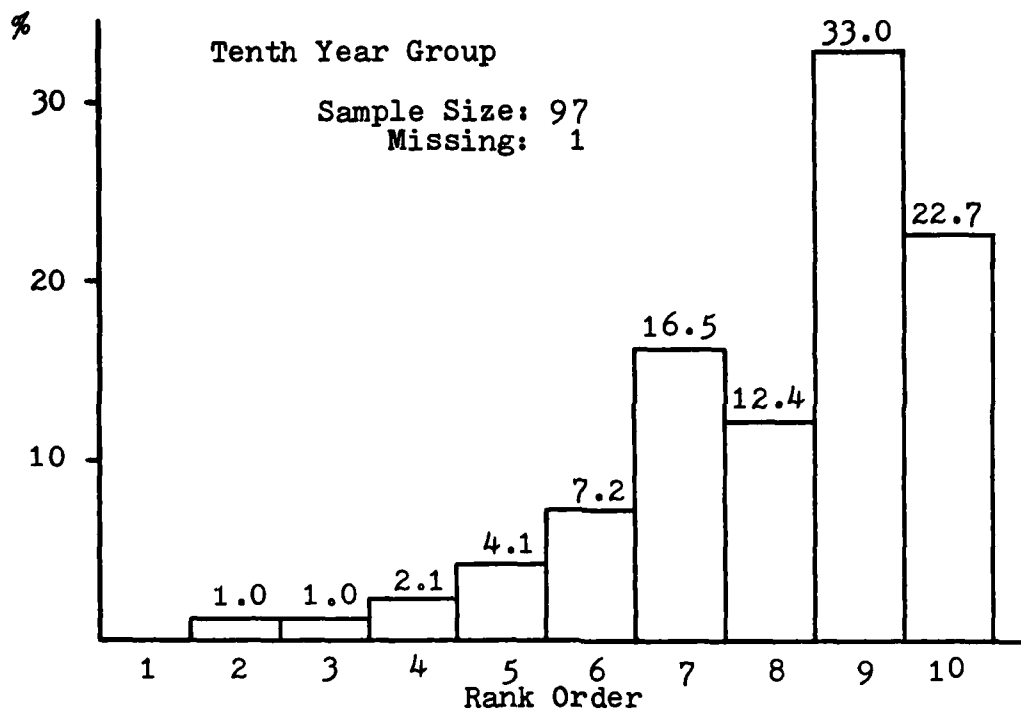


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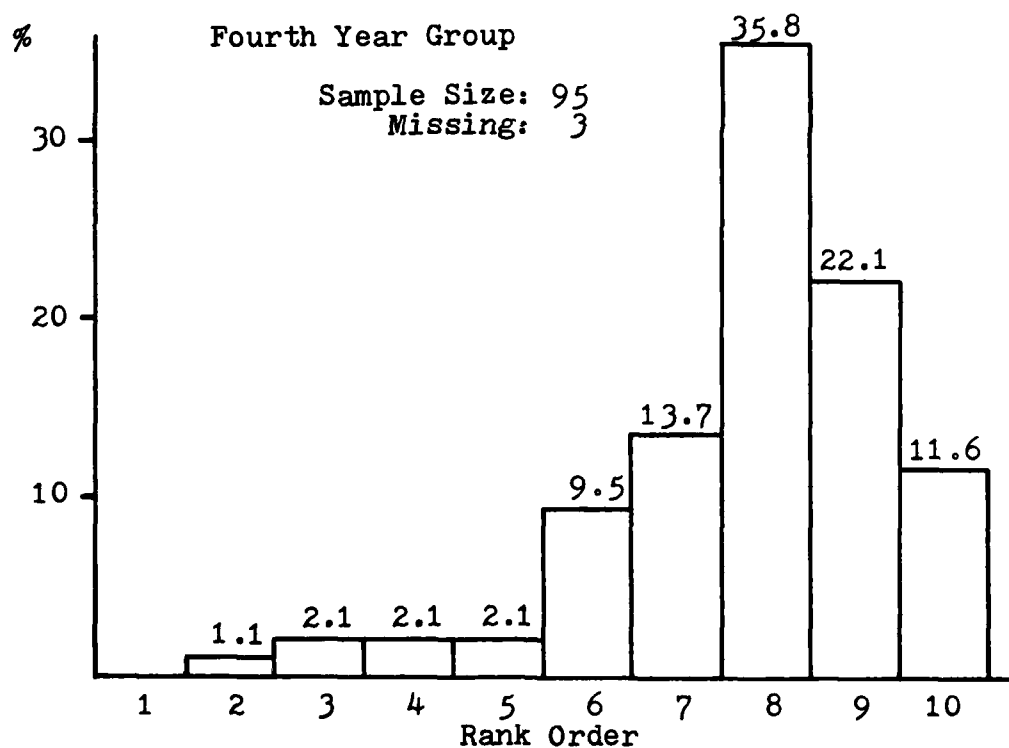
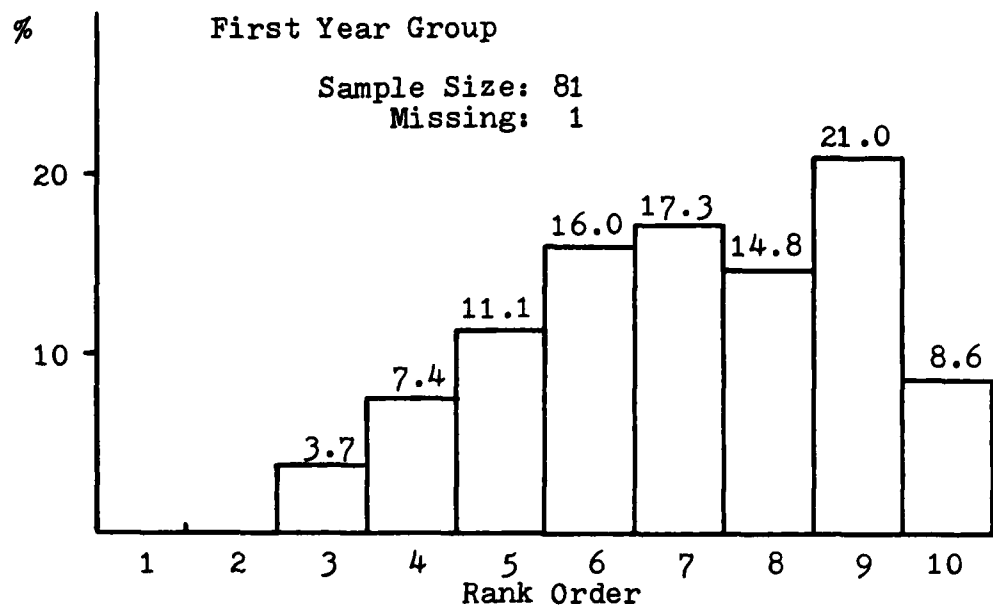


FIGURE D.7

Current Importance - Professional Services and Assistance

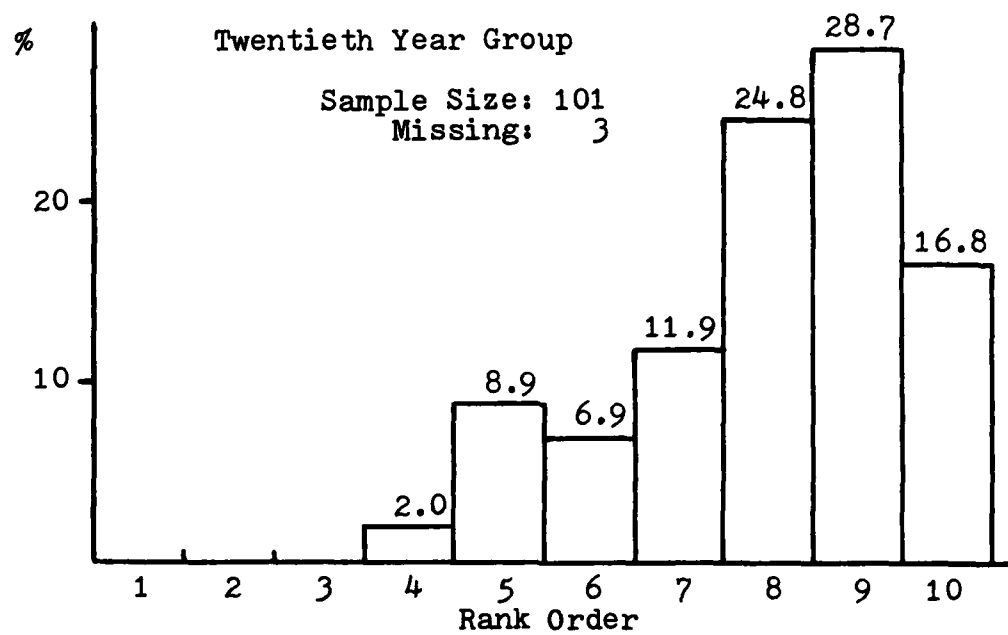
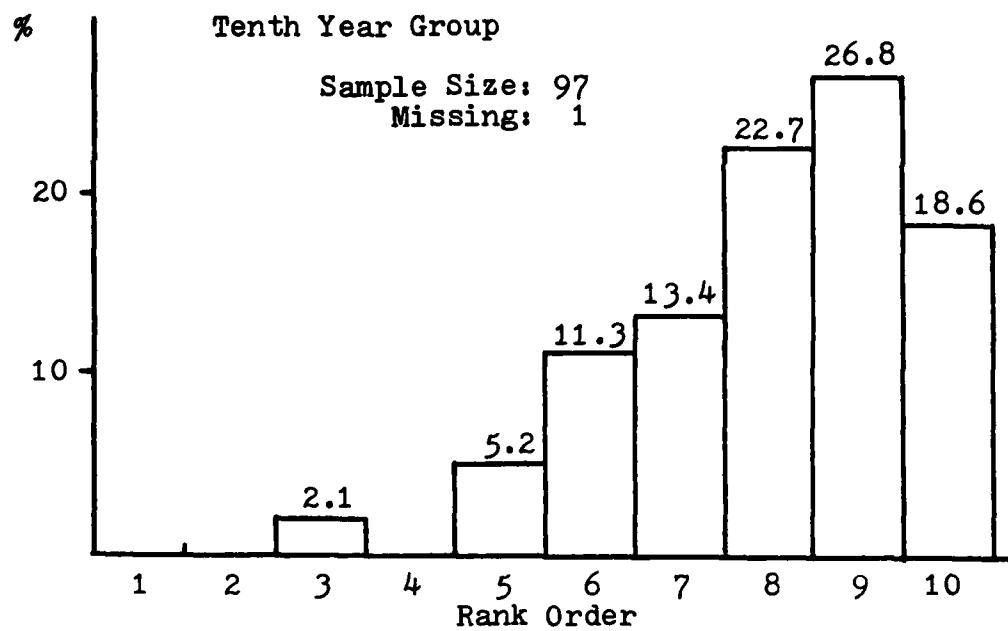


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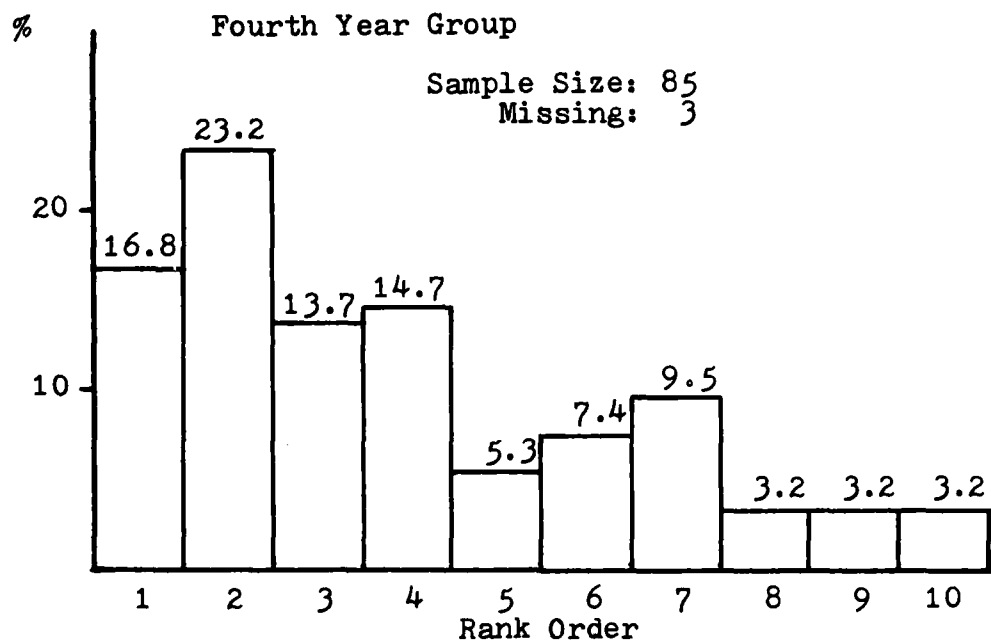
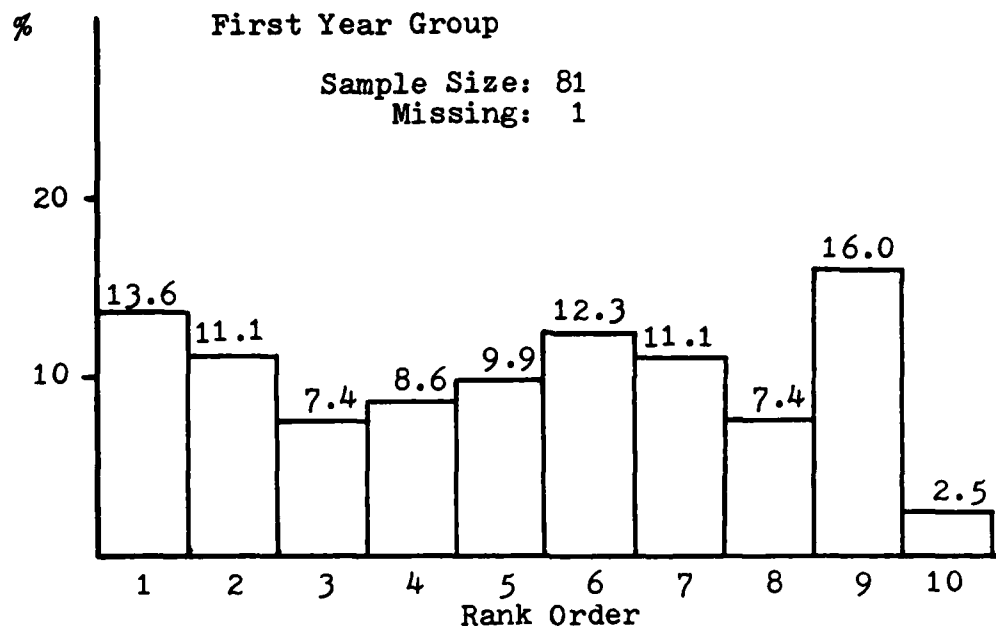


FIGURE D.8

Current Importance -  
Retirement Benefits

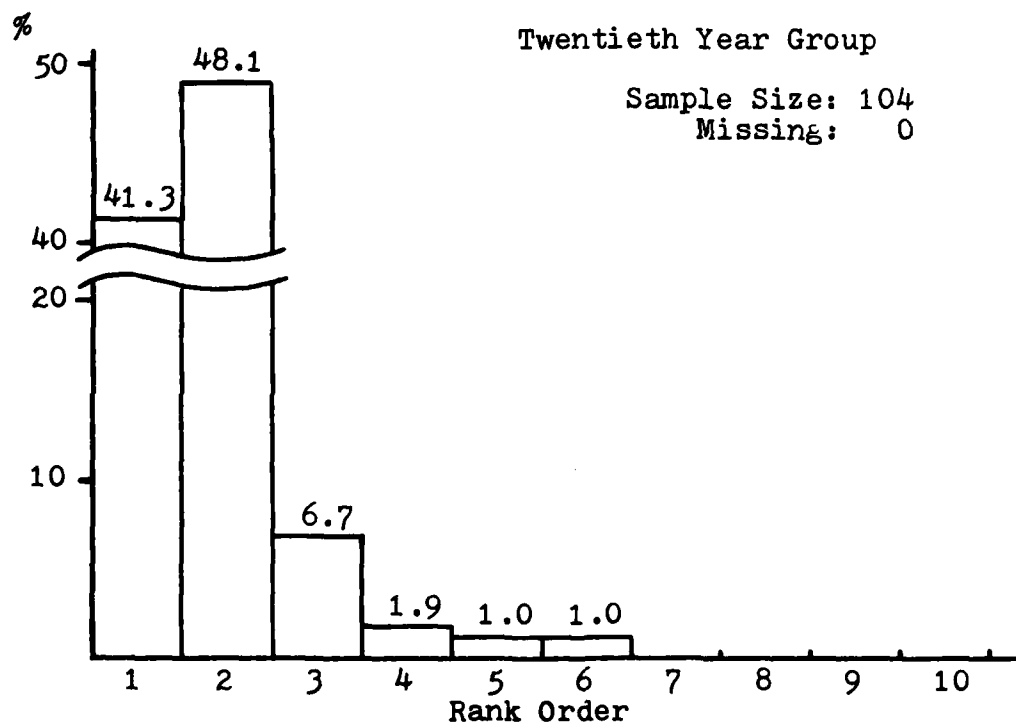
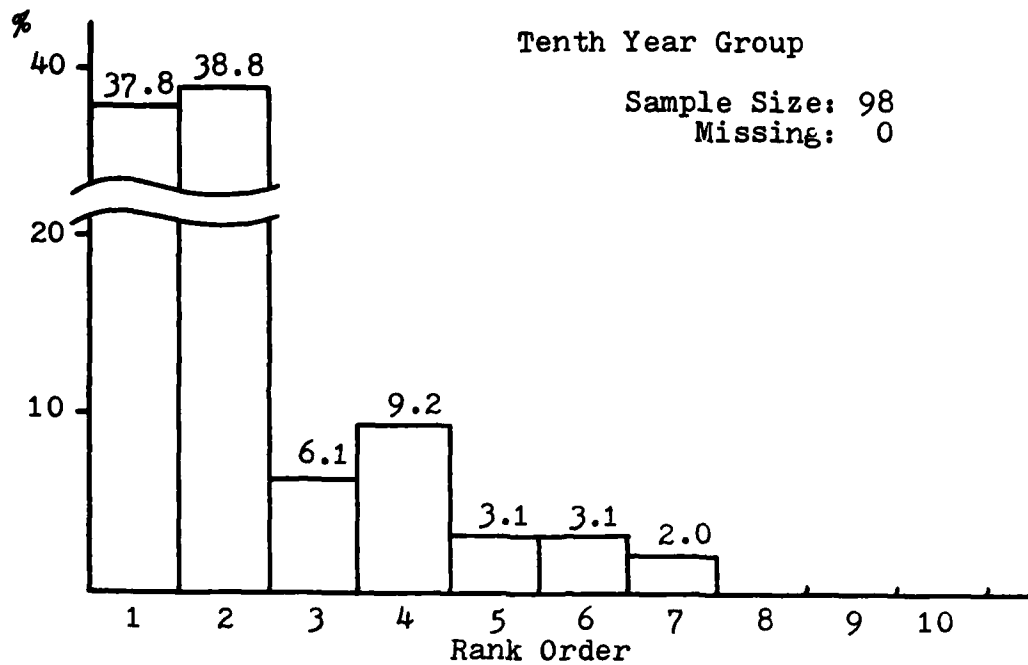


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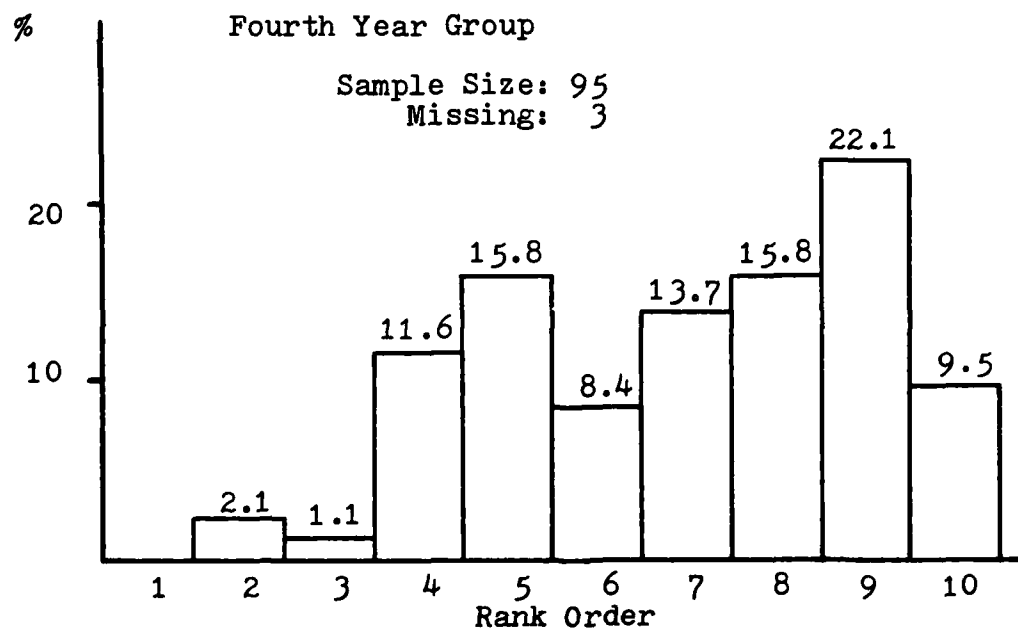
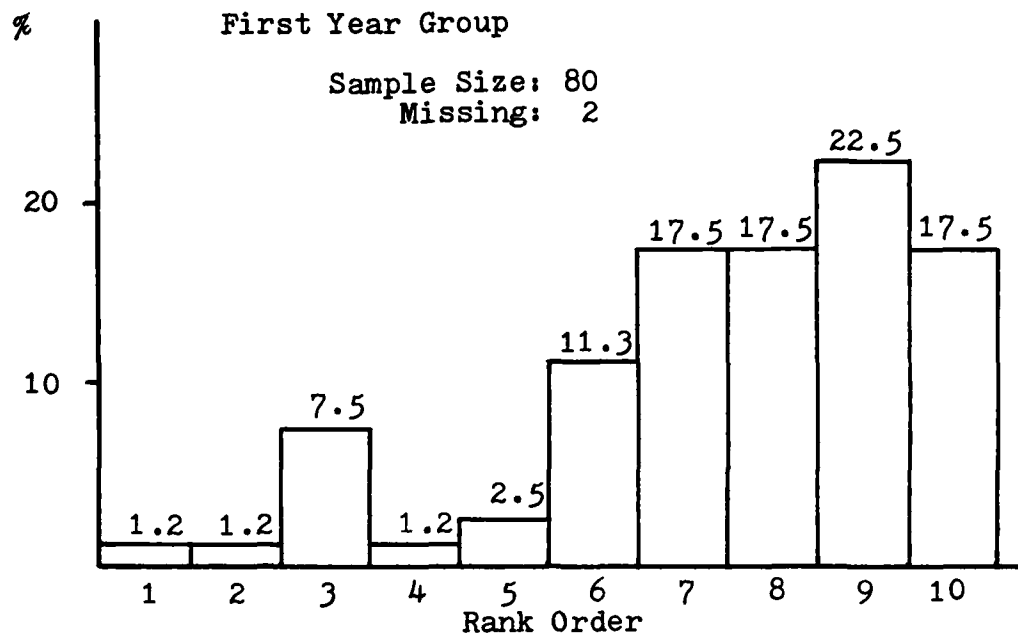


FIGURE D.9

Current Importance -  
Survivor Benefits



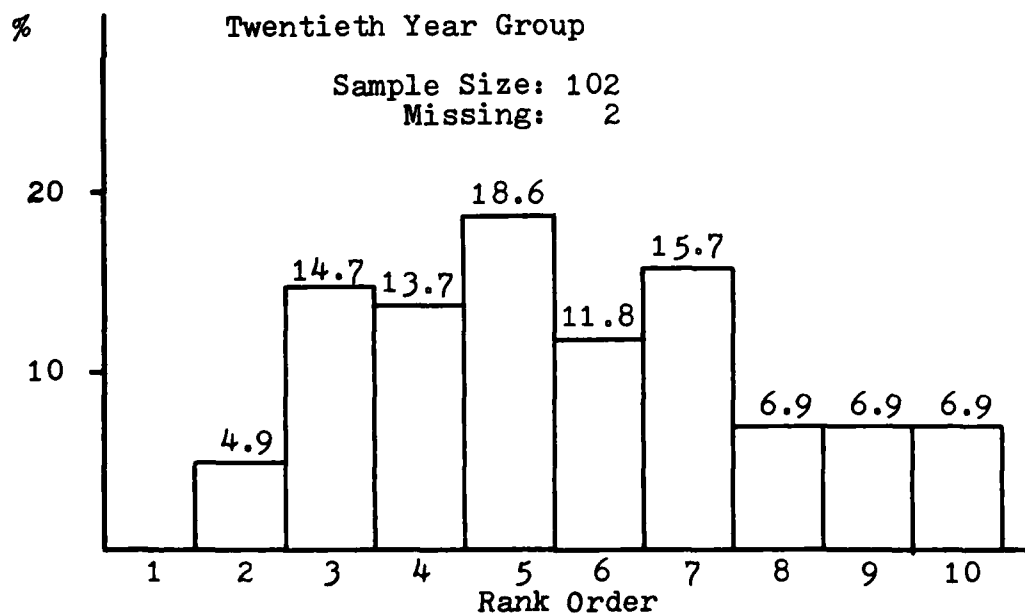
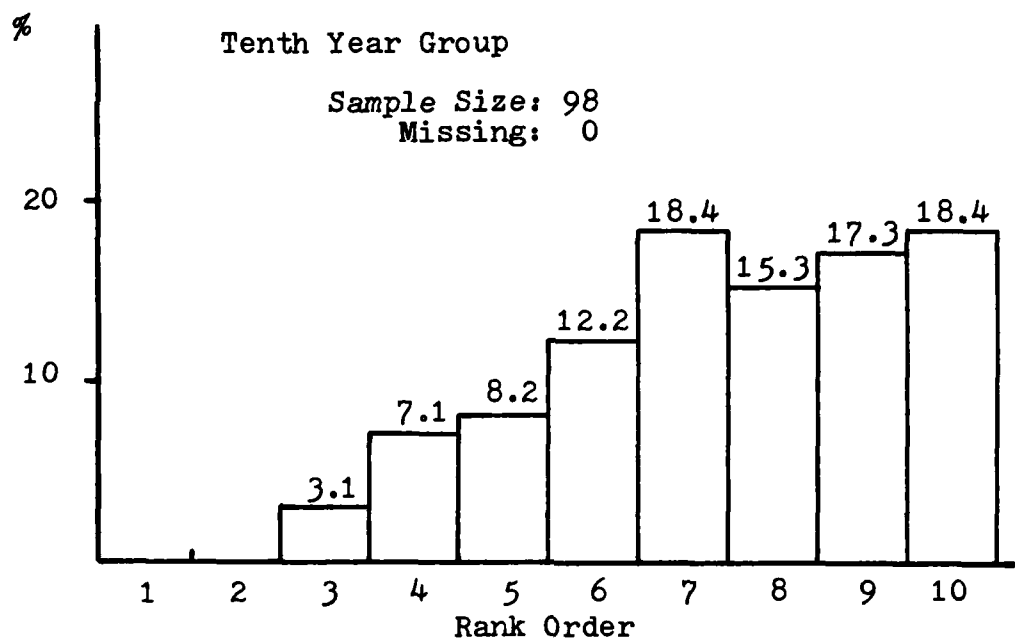


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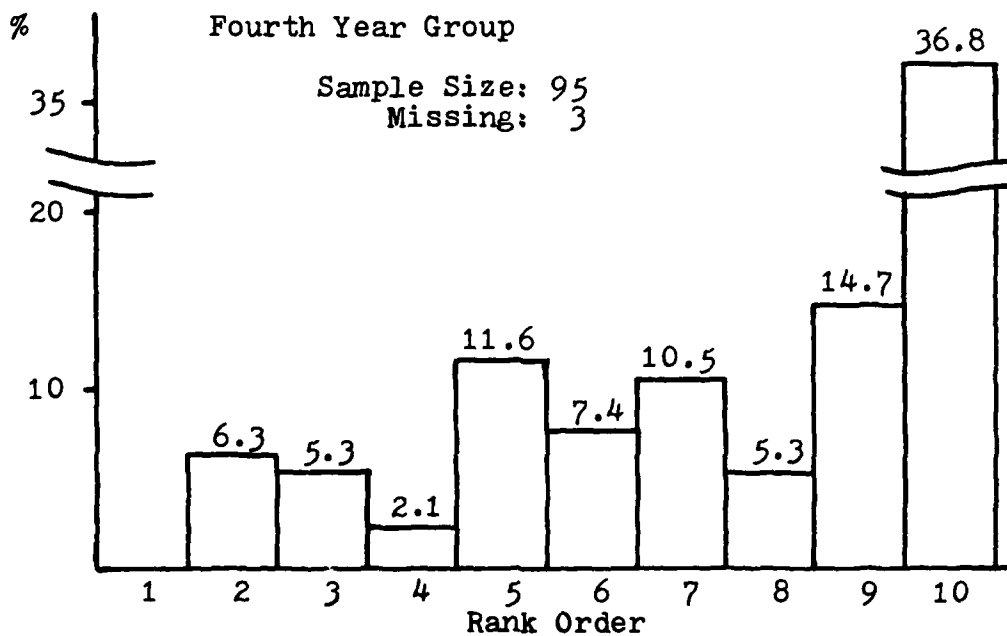
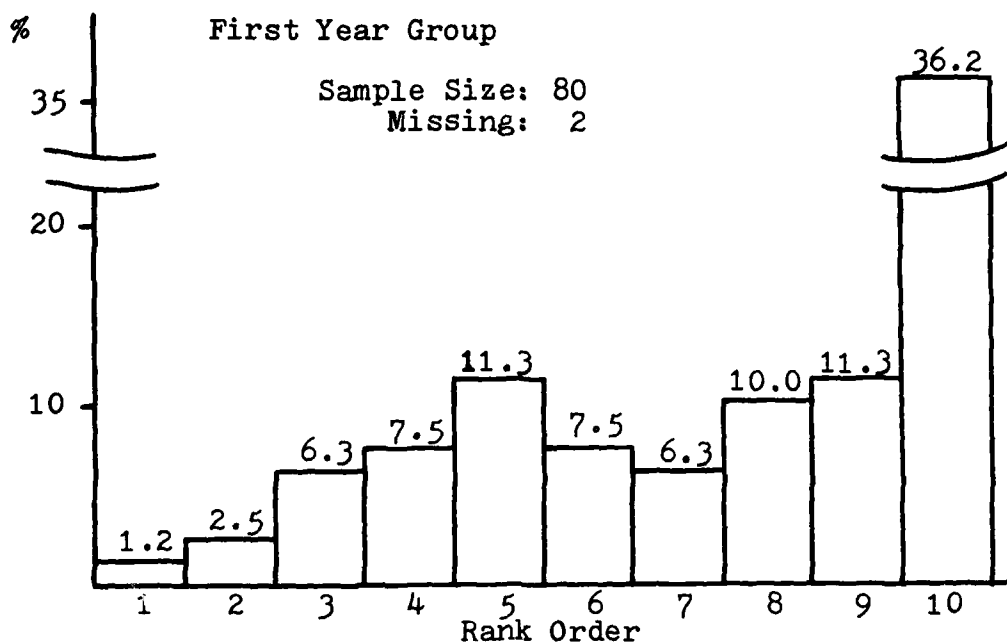


FIGURE D.10  
Current Importance - Tax Advantages

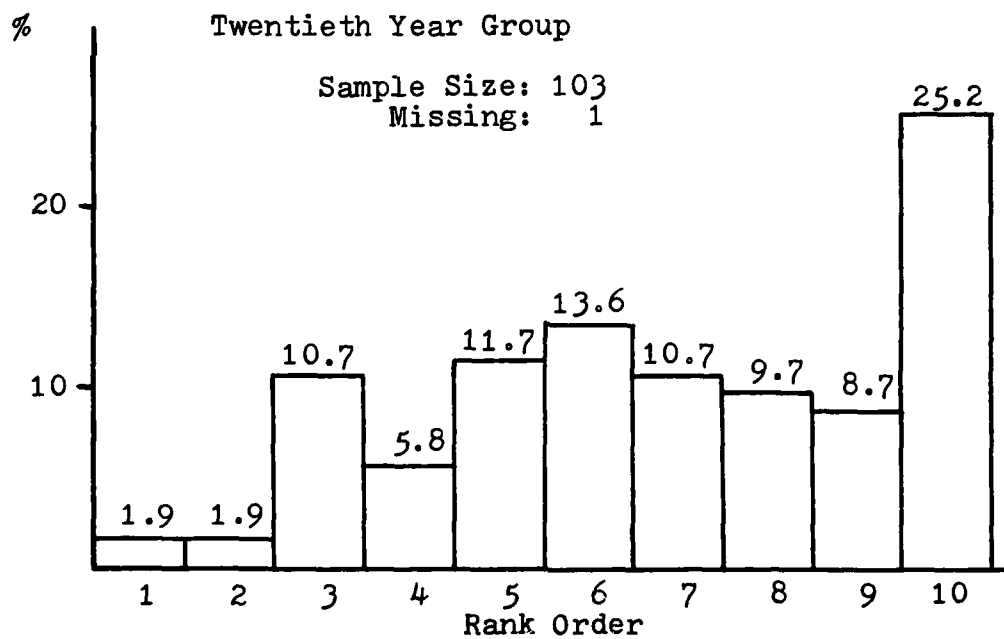
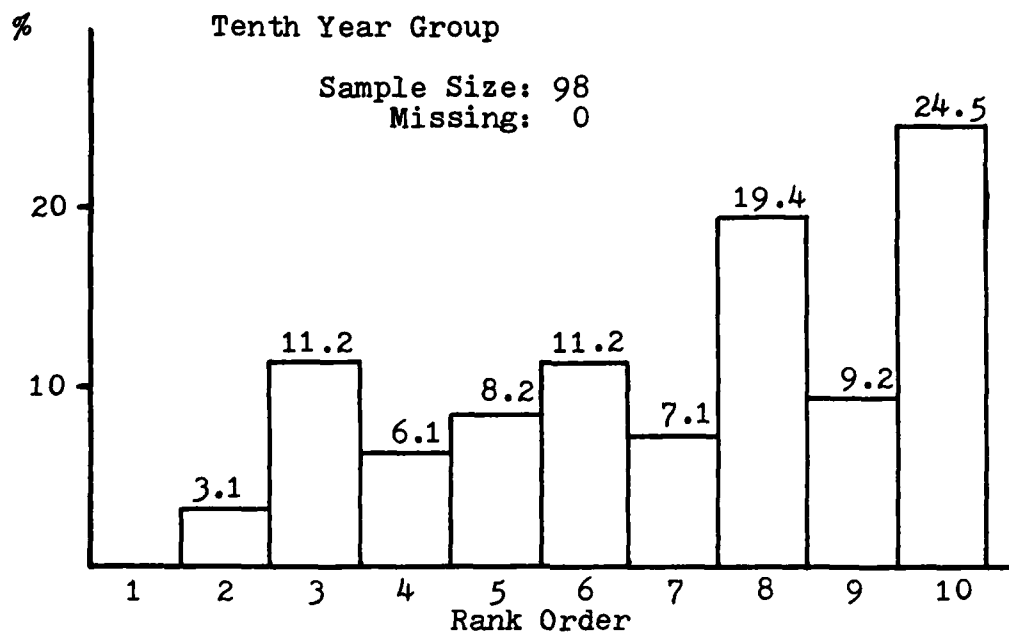


FIGURE D.10  
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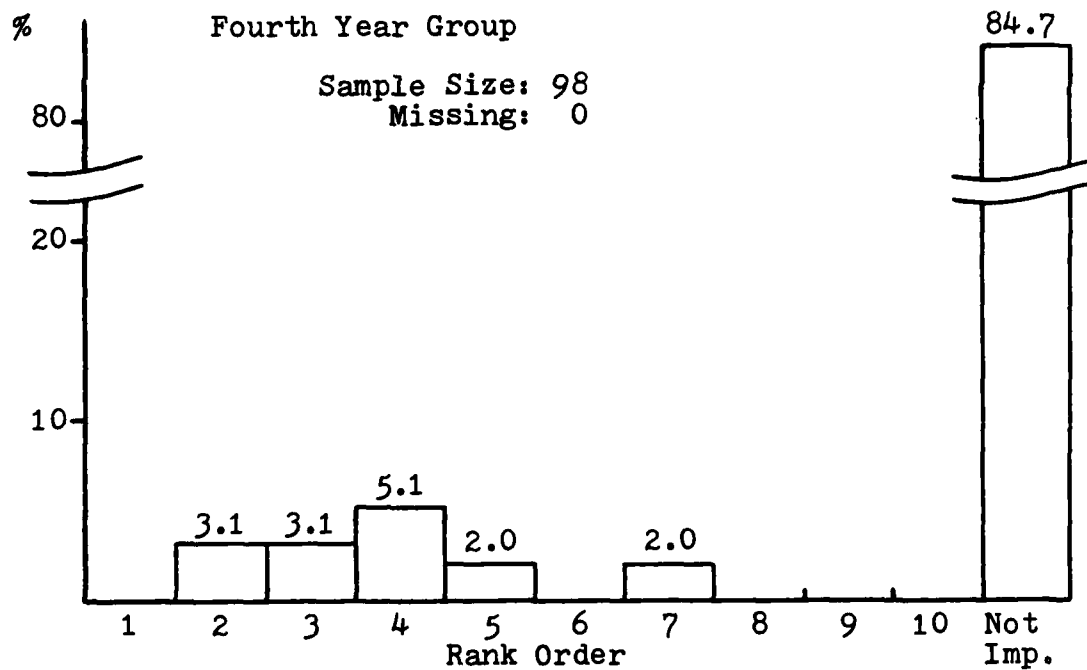
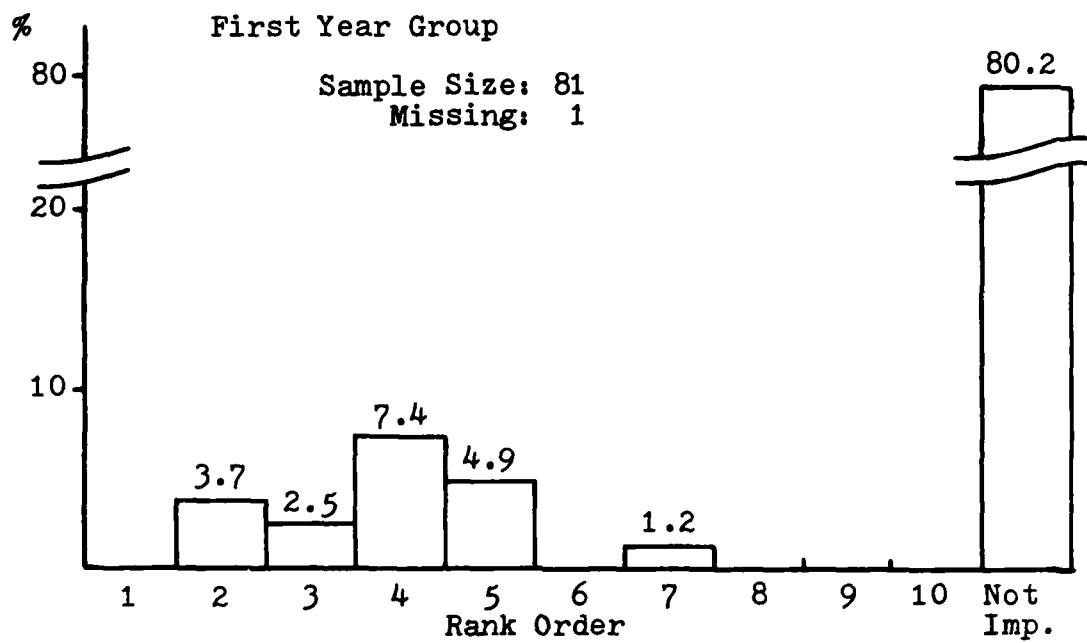


FIGURE D.11

Entry Importance -  
Commissary and Base Exchange

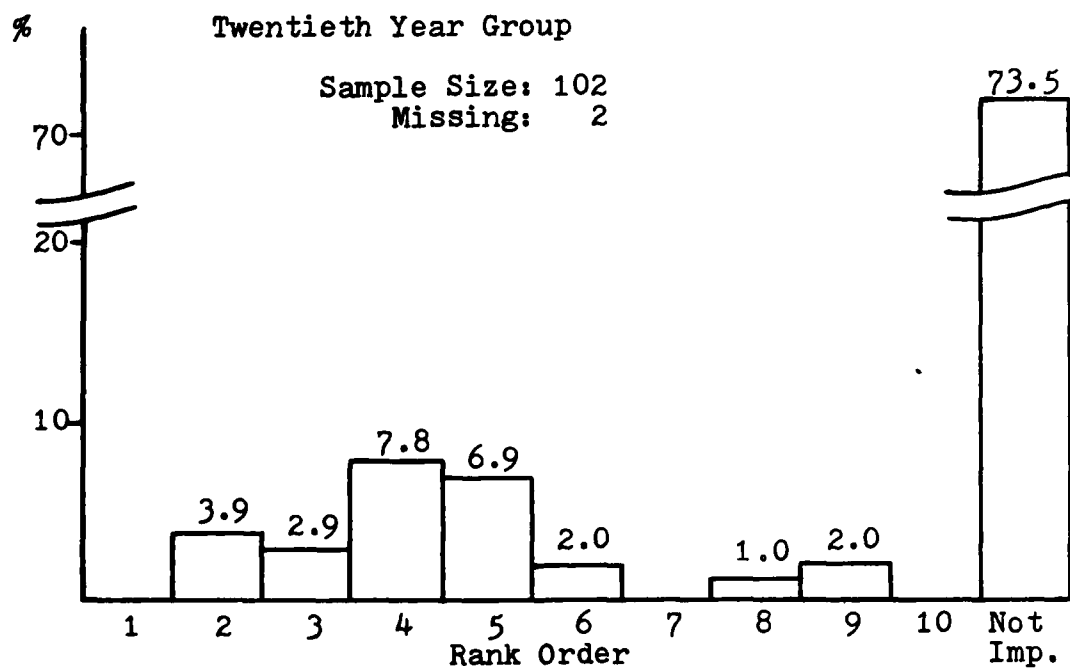
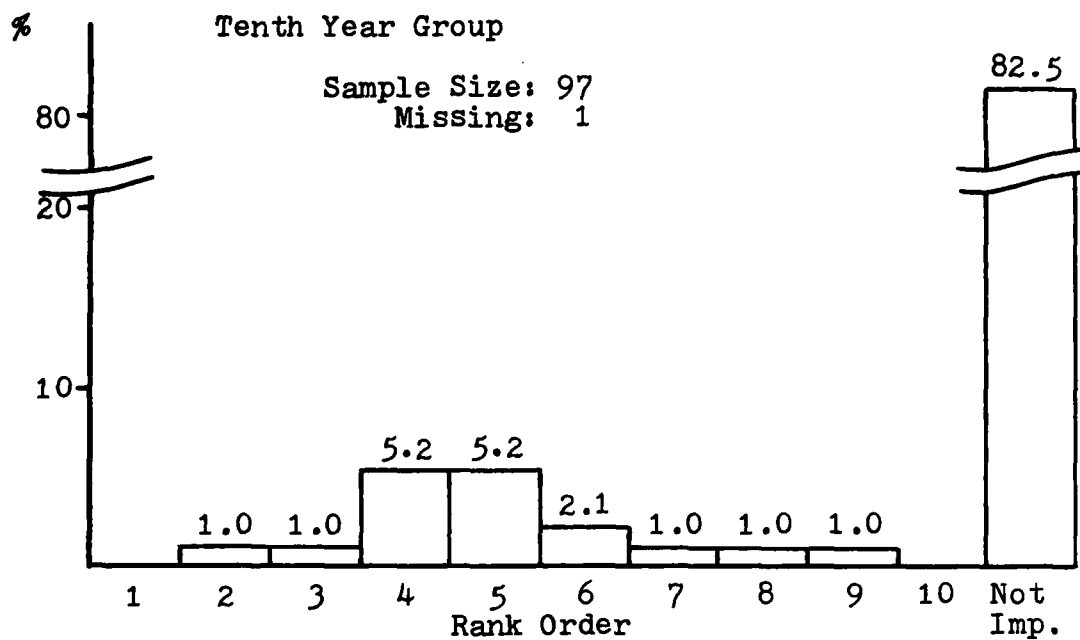


FIGURE D.11  
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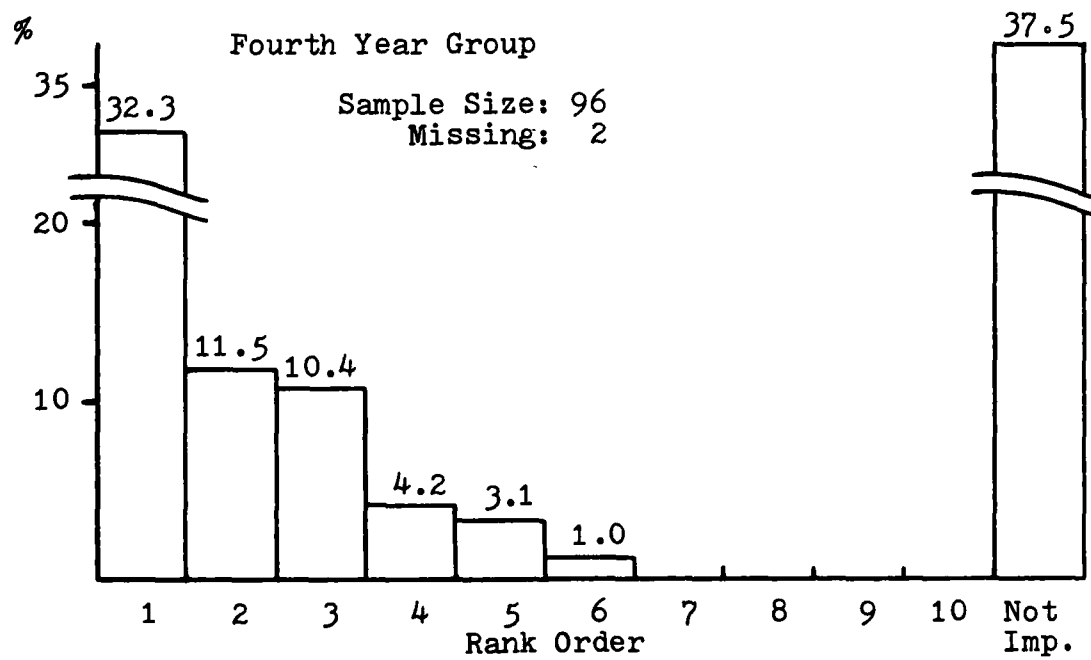
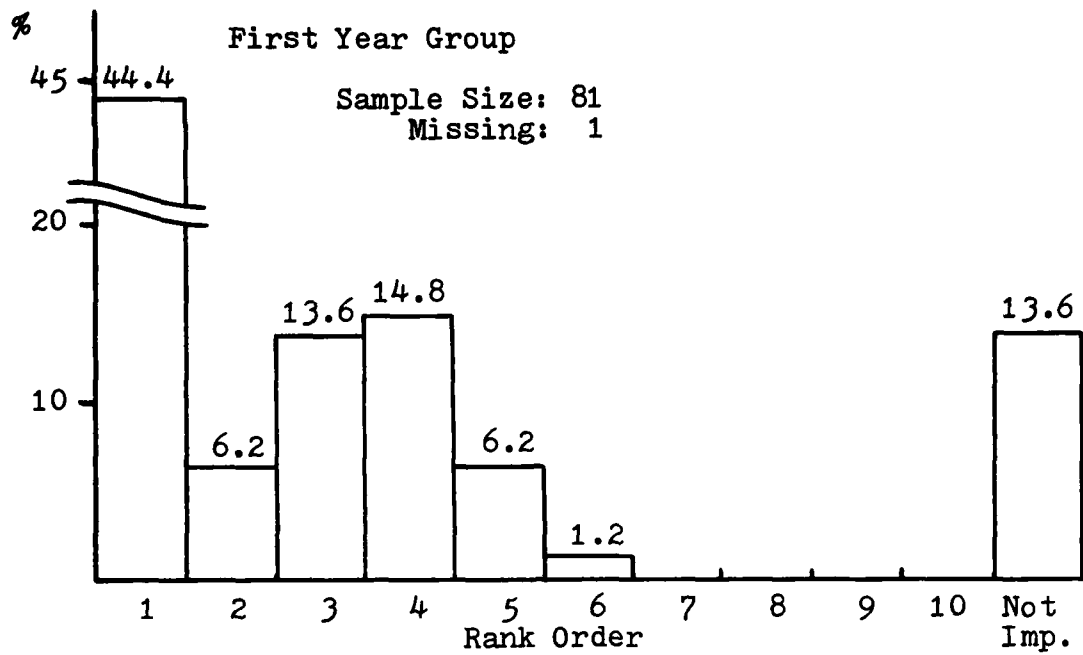


FIGURE D.12

Entry Importance -  
Education Opportunities

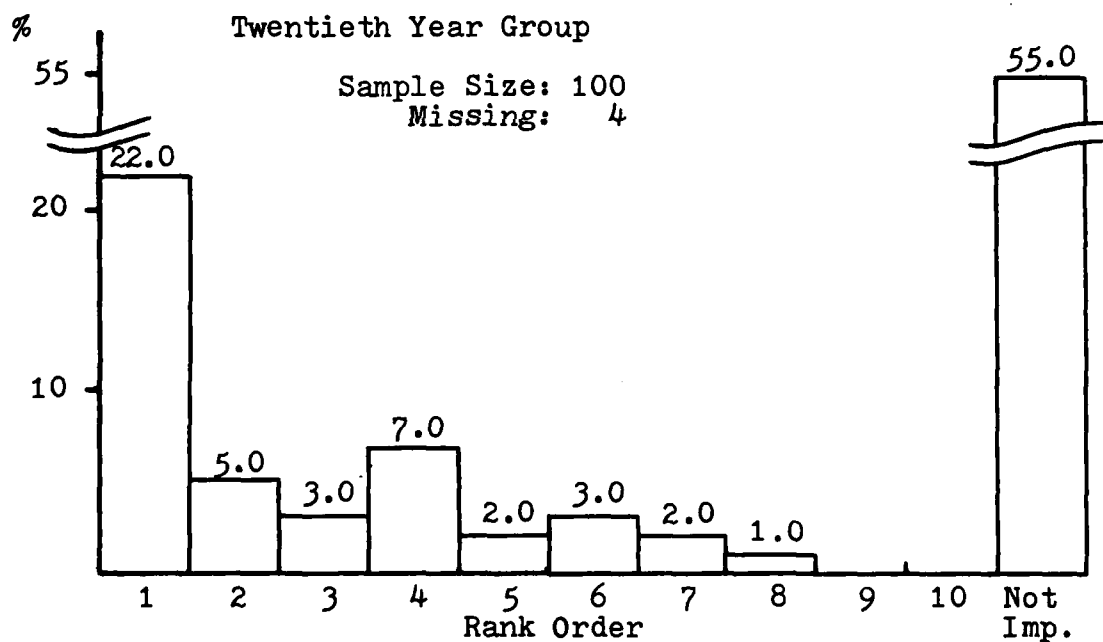
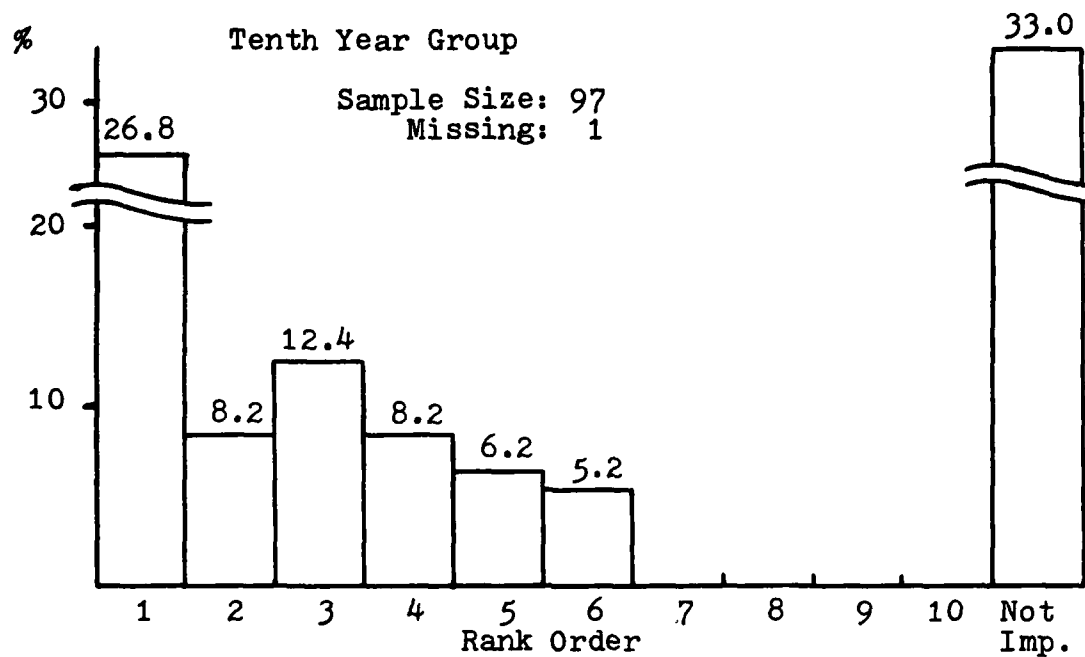


FIGURE D.12  
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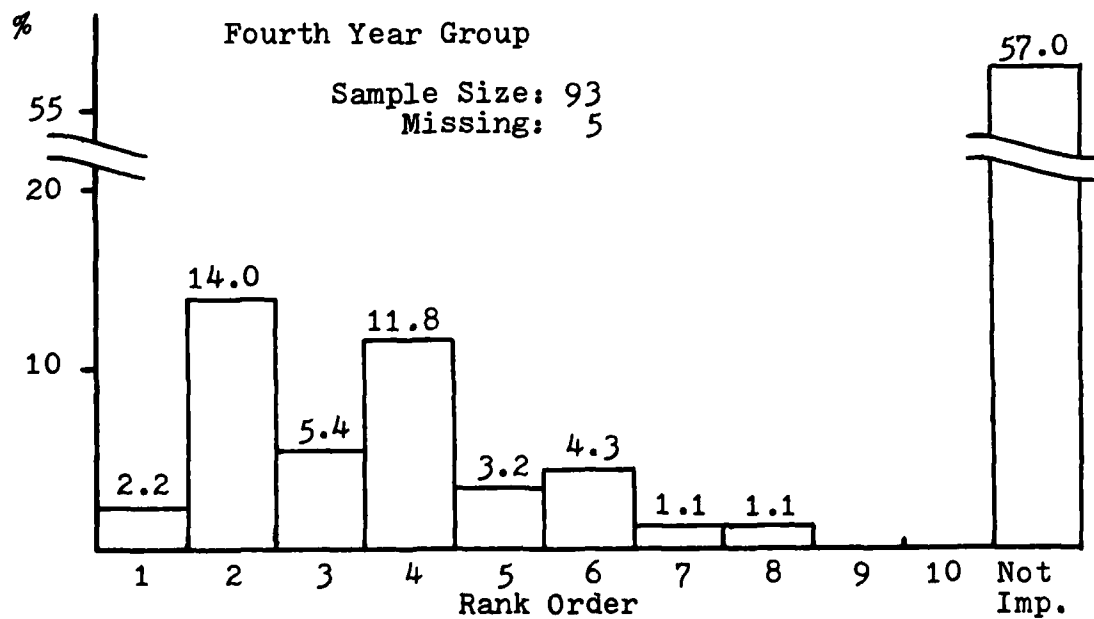
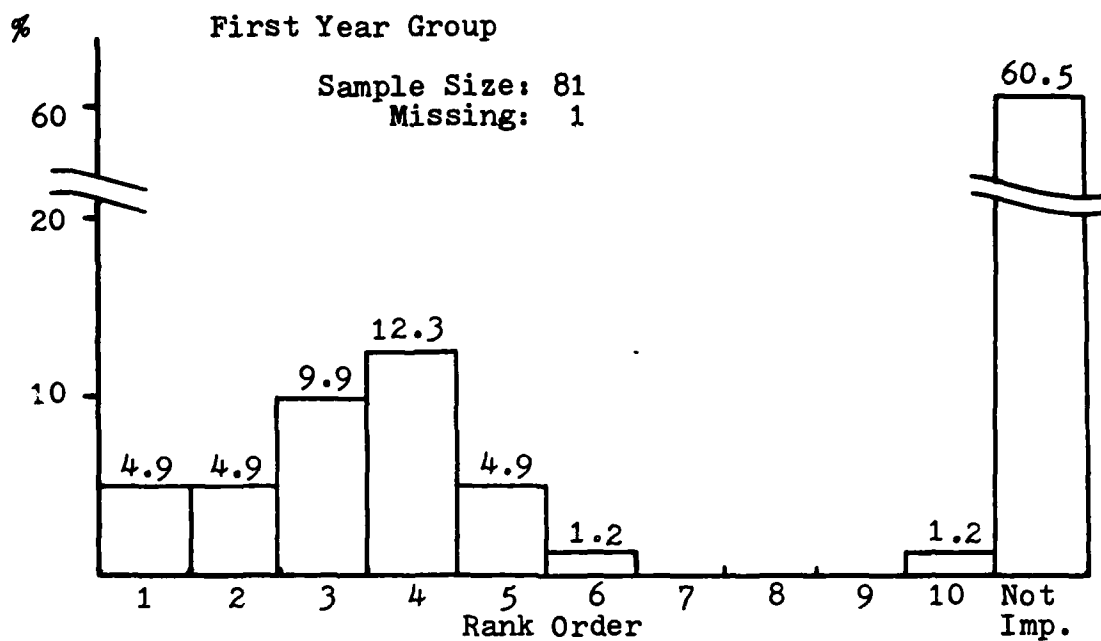


FIGURE D.13

Entry Importance -  
Leave and Holidays



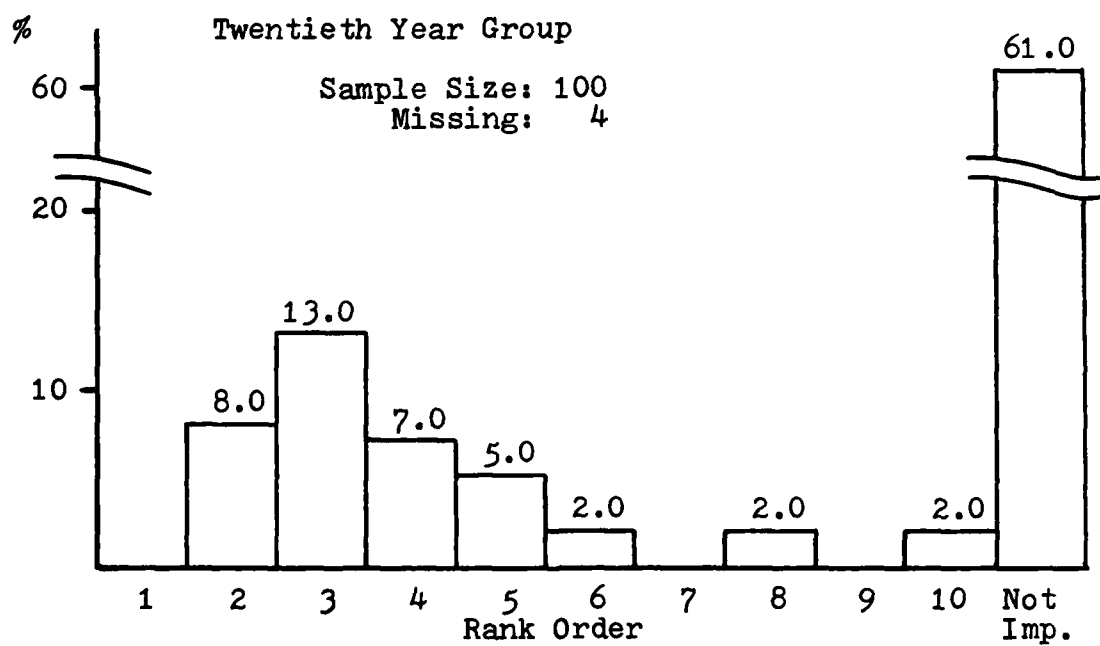
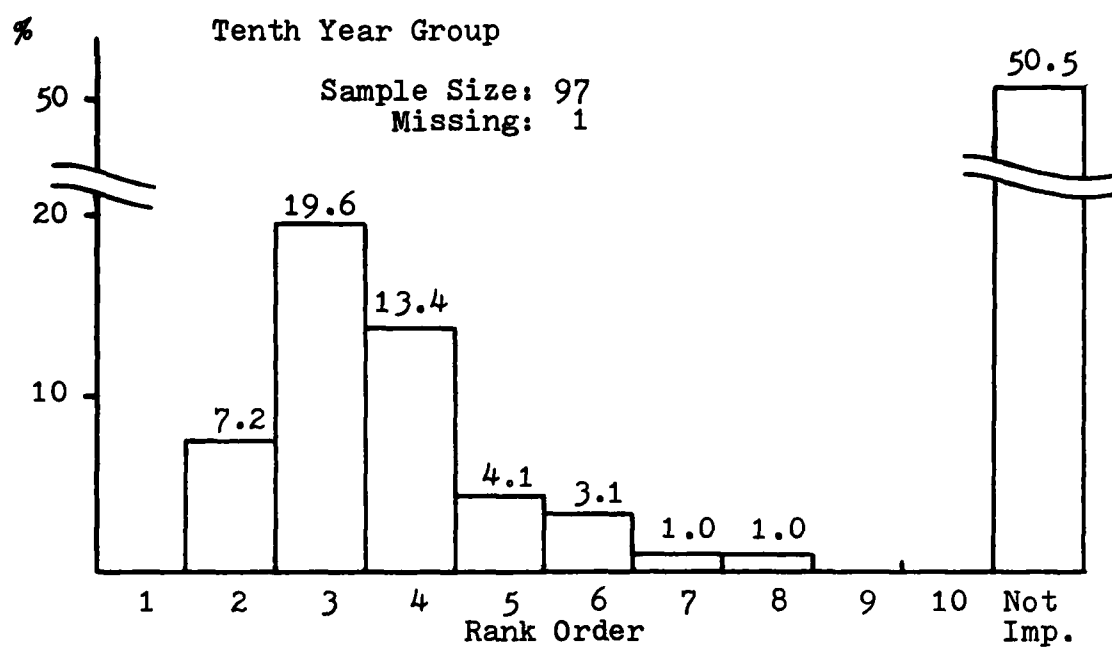


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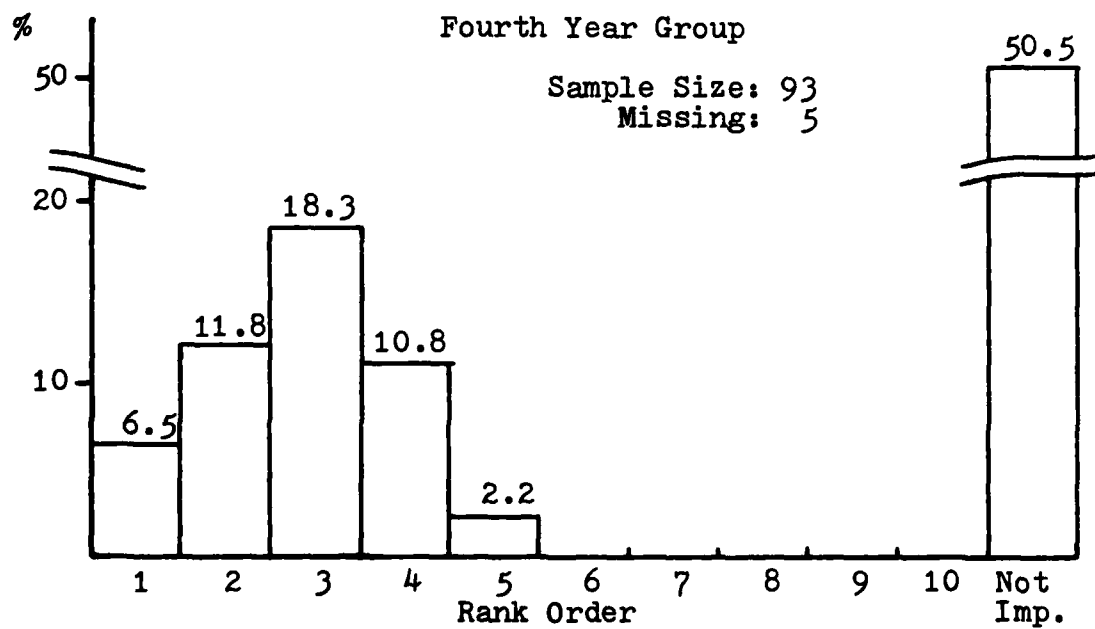
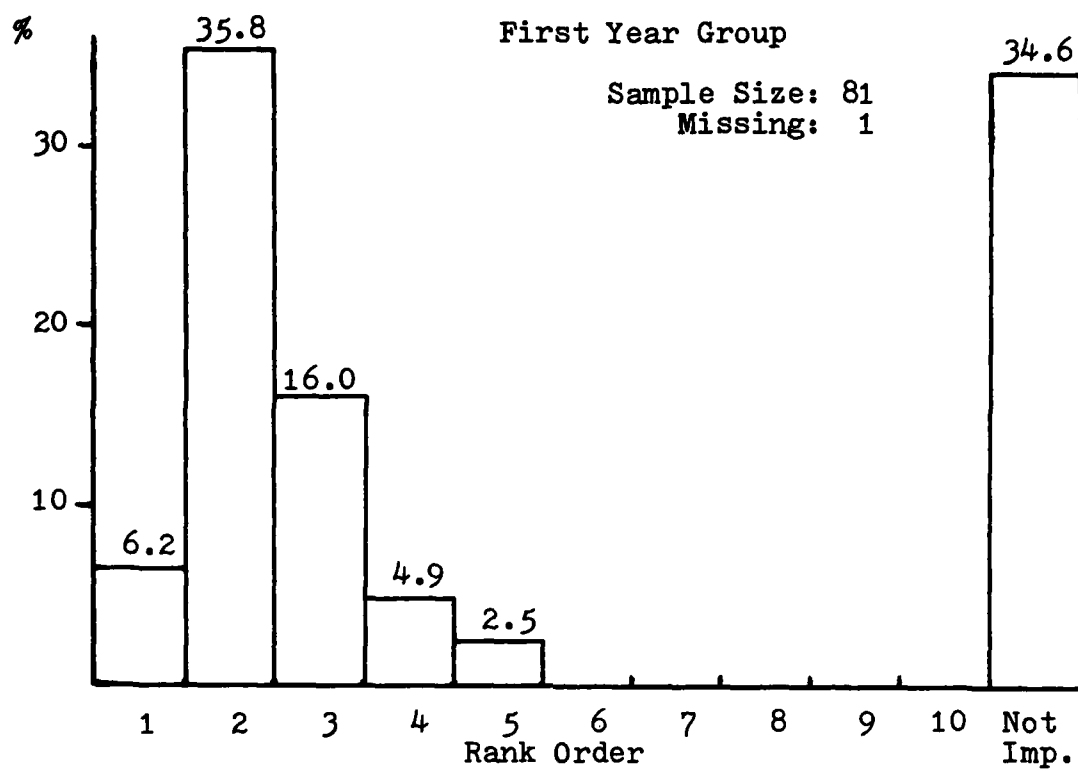


FIGURE D.14

Entry Importance - Medical and Dental Benefits

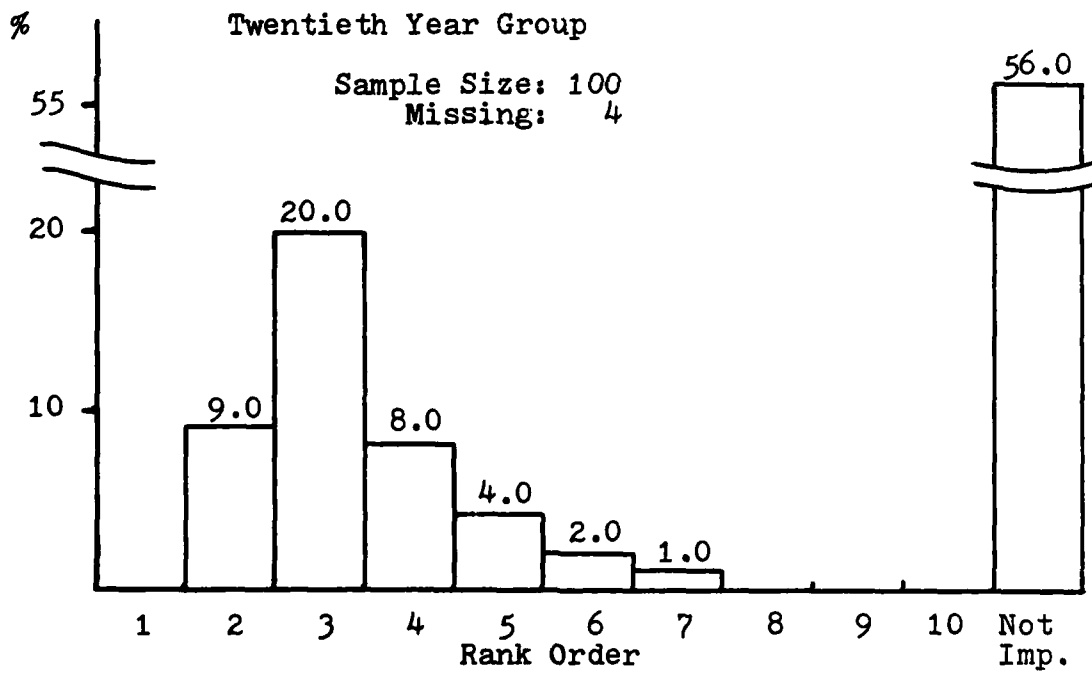
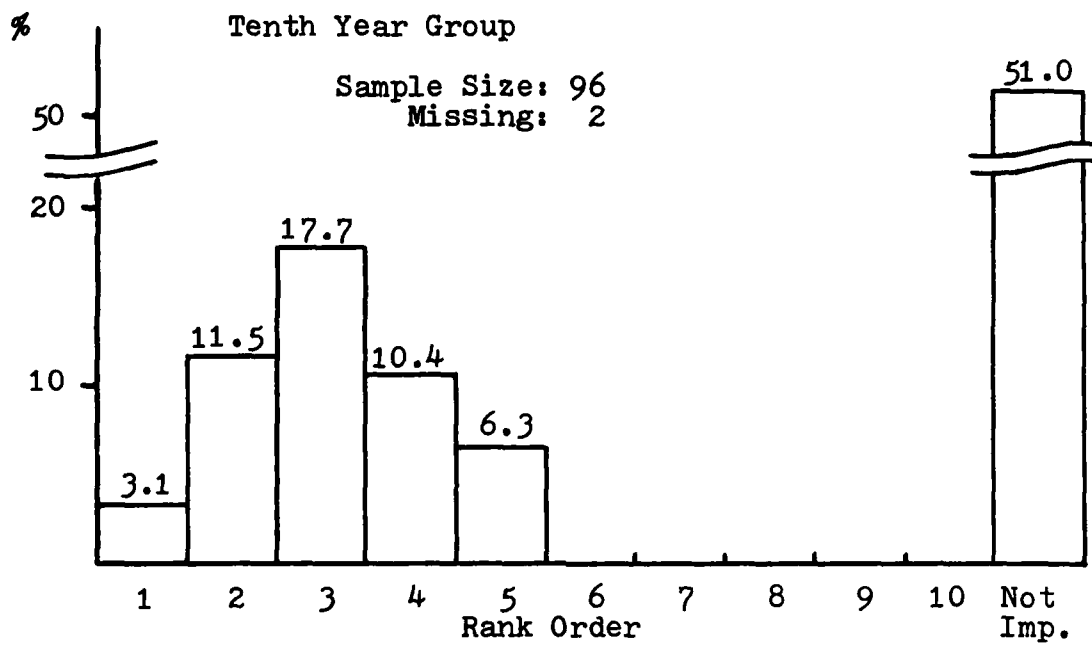


FIGURE D.14  
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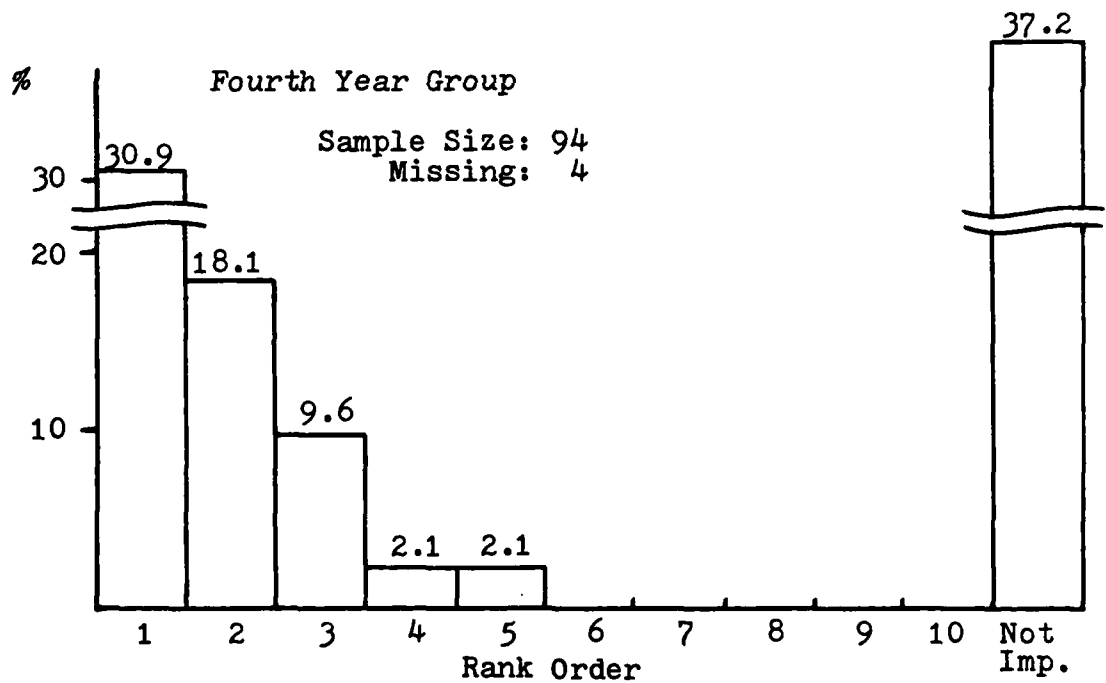
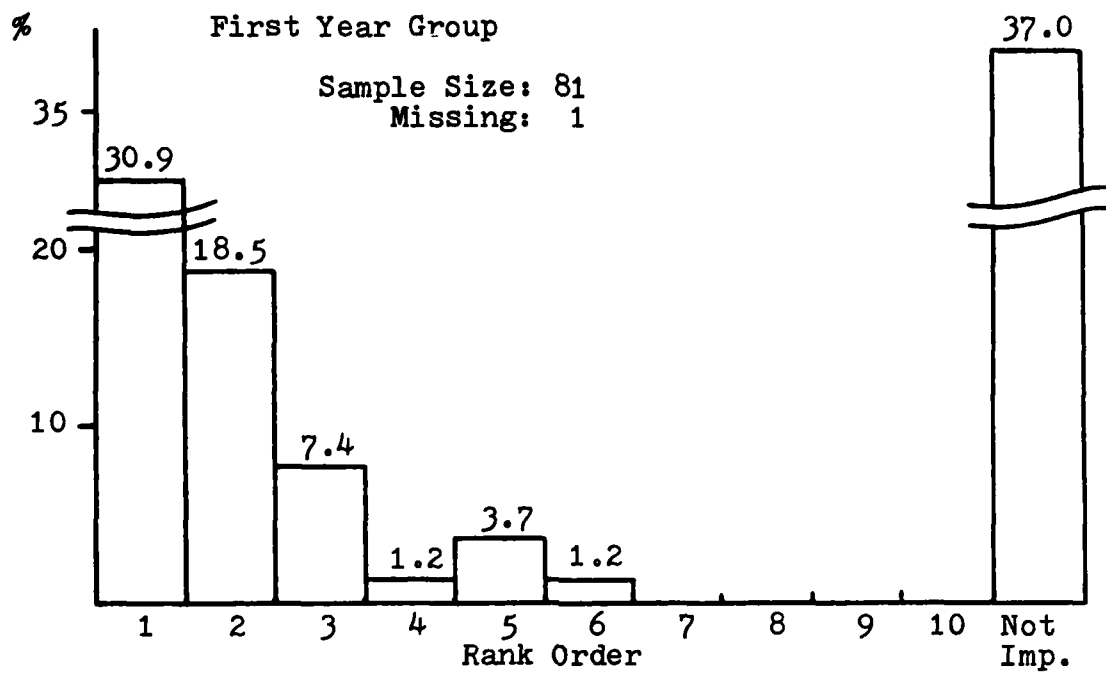


FIGURE D.15

Entry Importance -  
Monetary Compensation

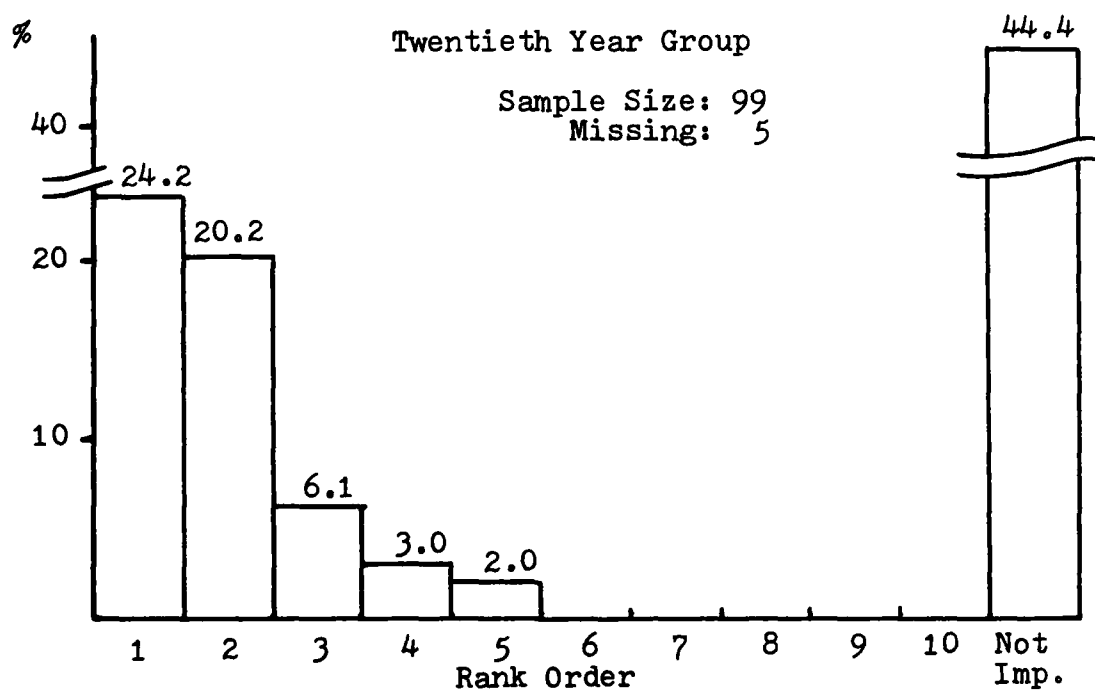
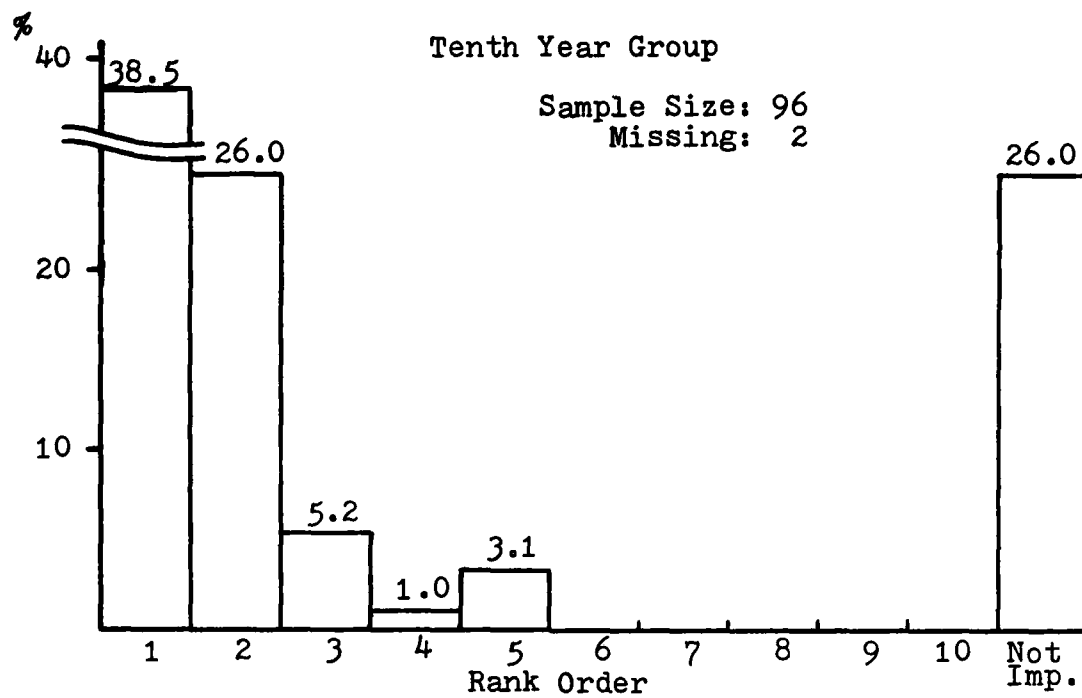


FIGURE D.15  
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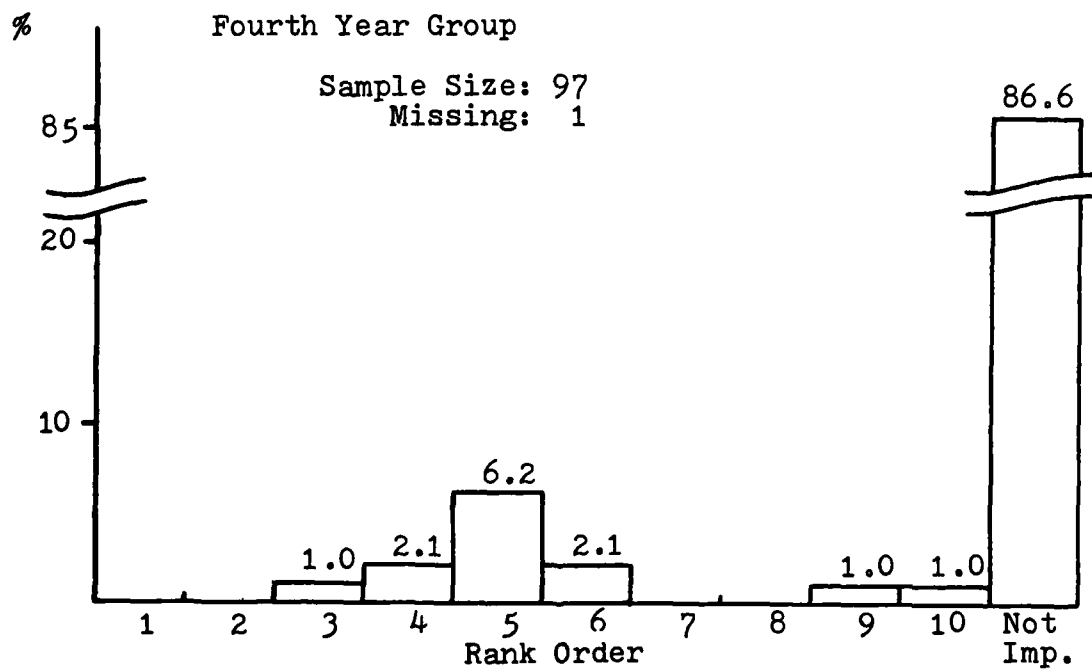
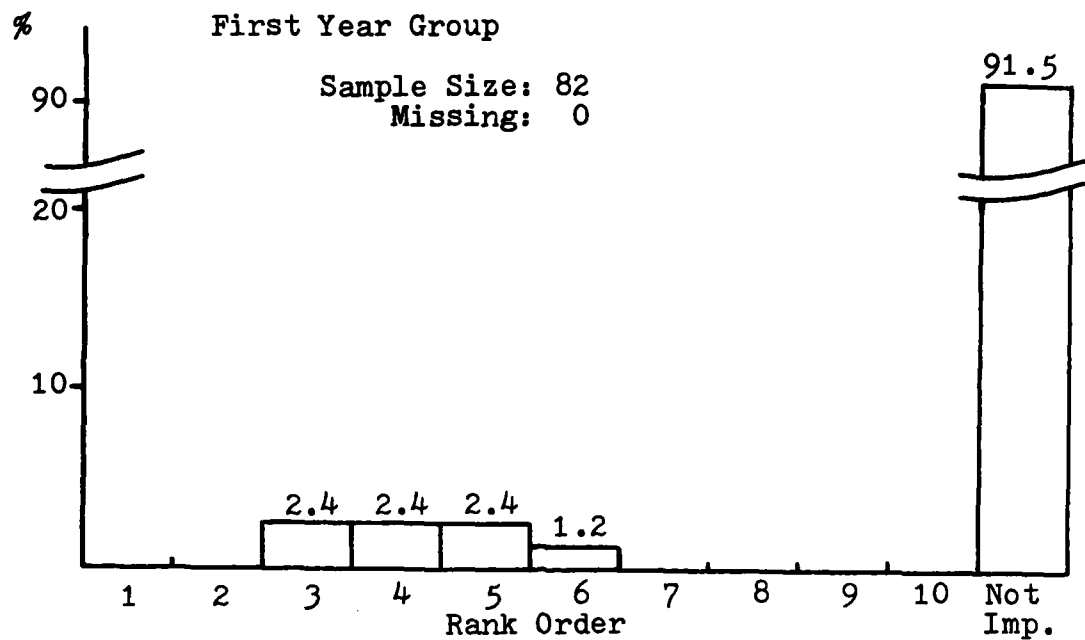


FIGURE D.16

Entry Importance -  
 Morale, Welfare, and Recreation

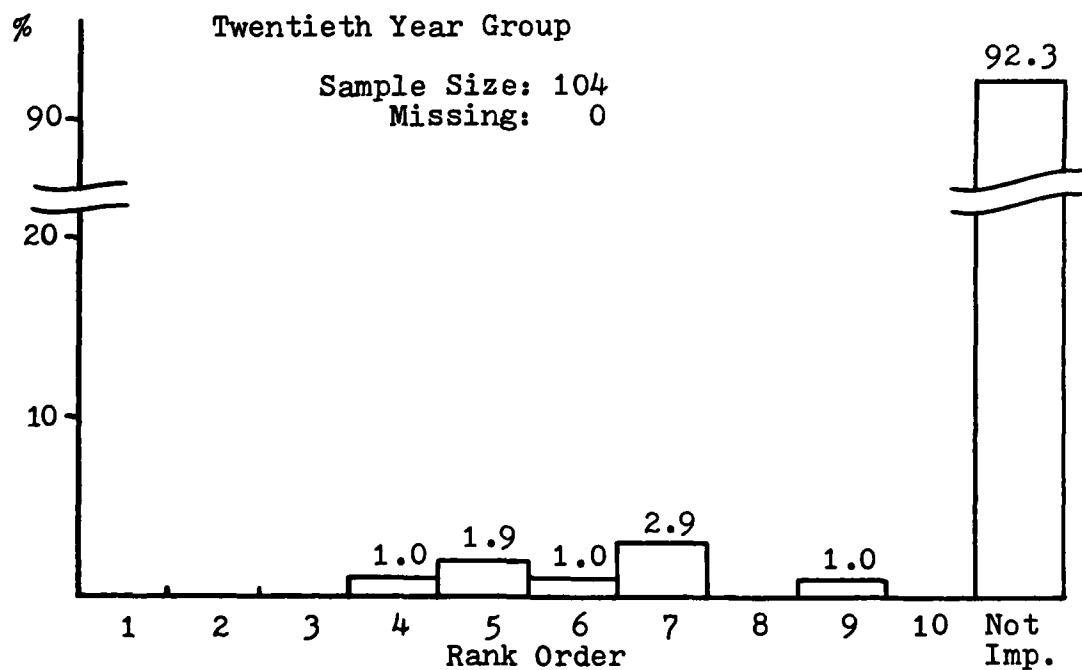
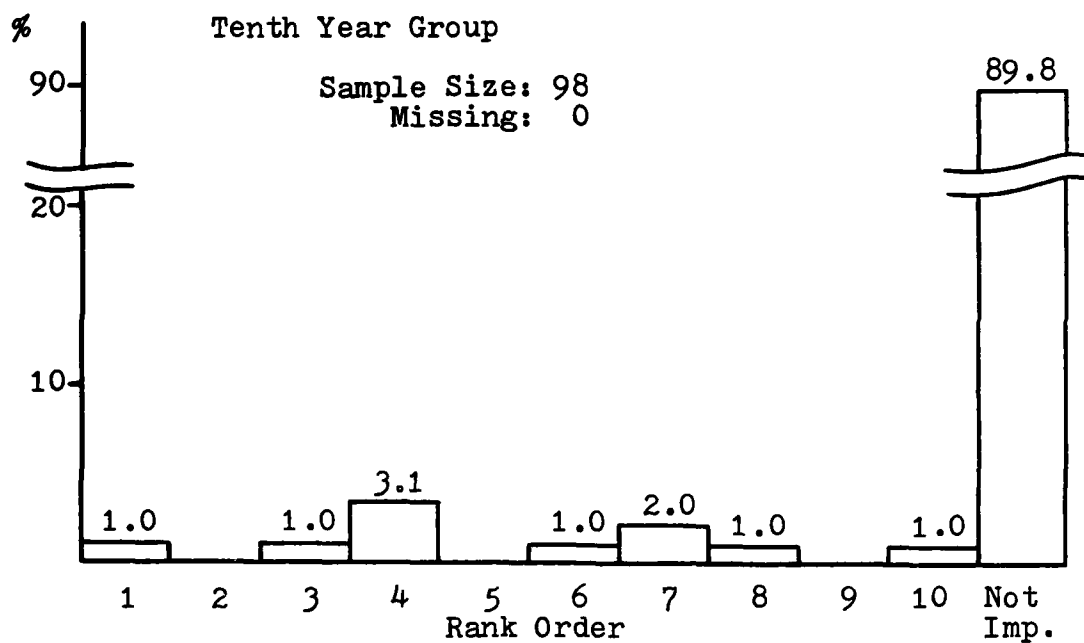


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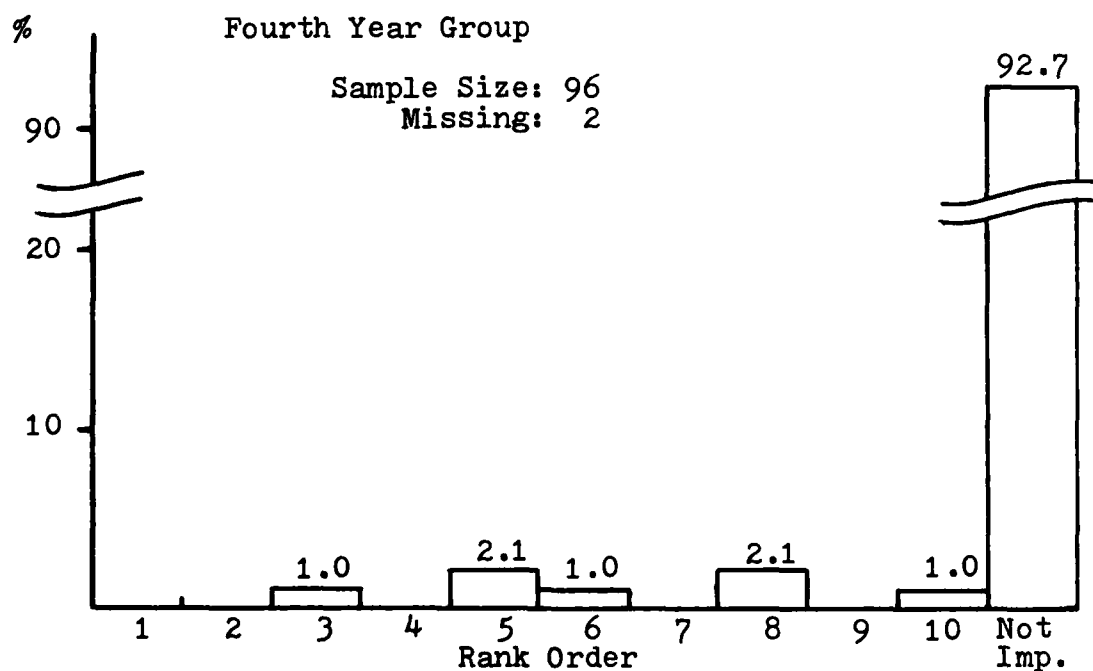
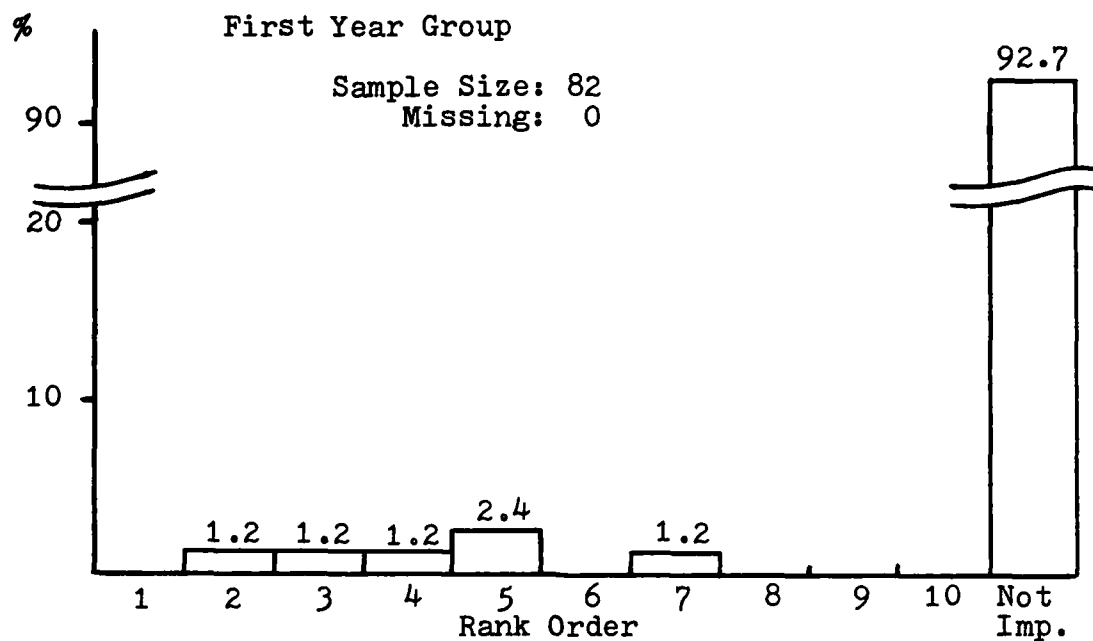


FIGURE D.17

Entry Importance -  
Professional Services and Assistance



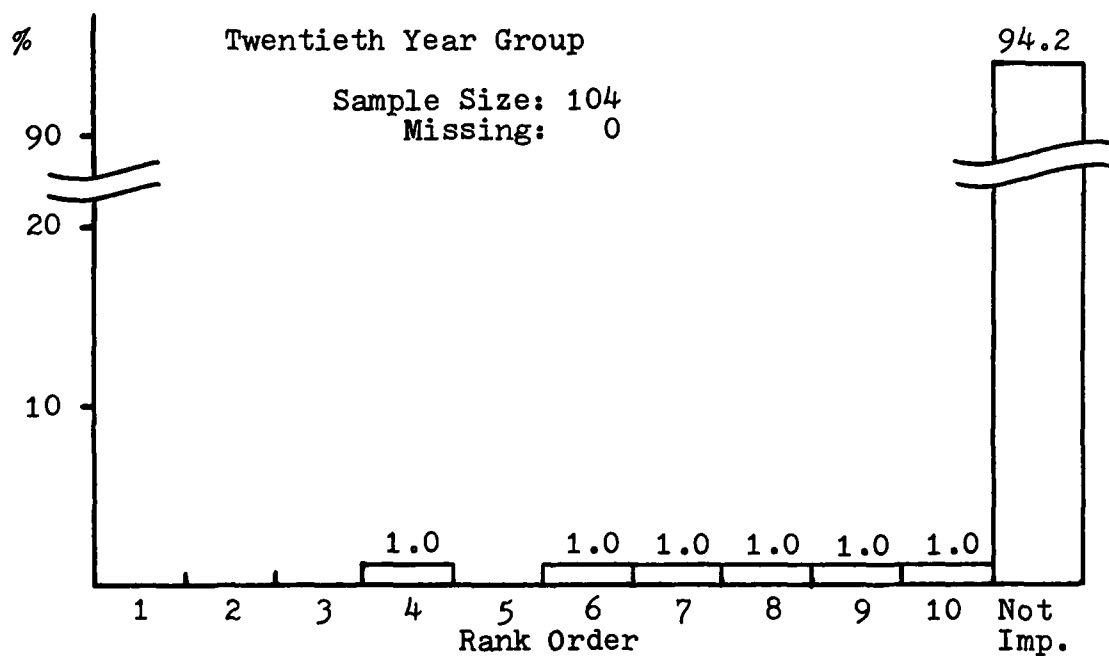
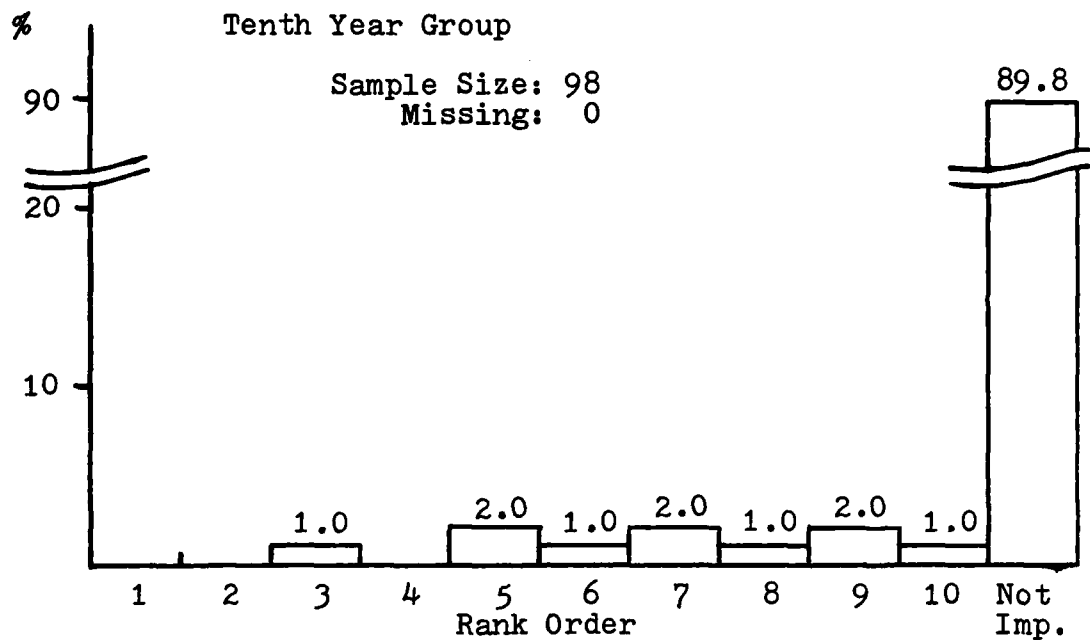


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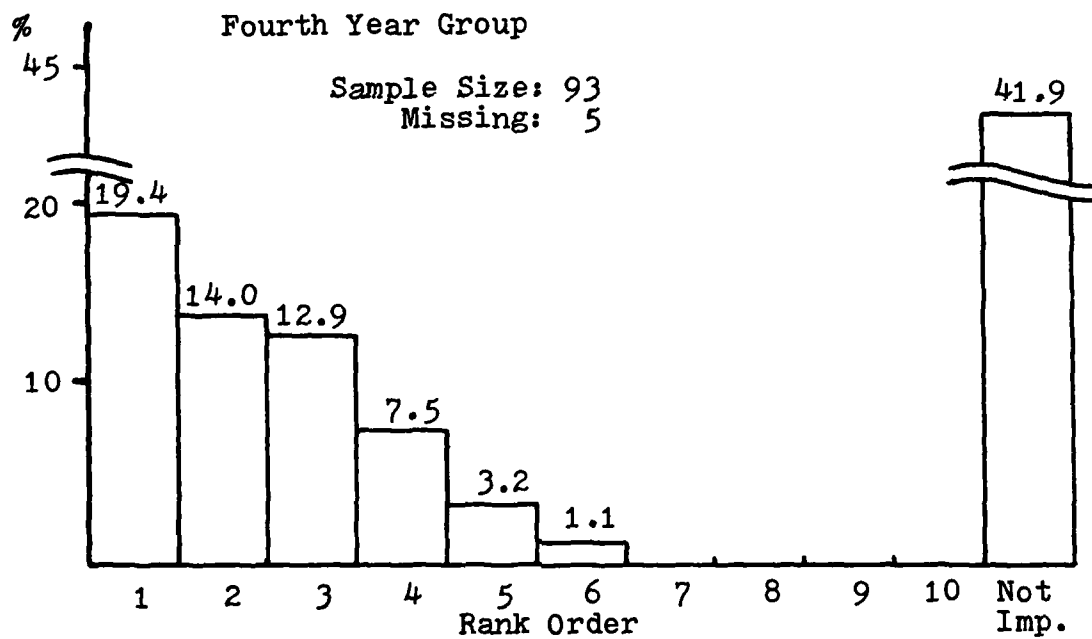
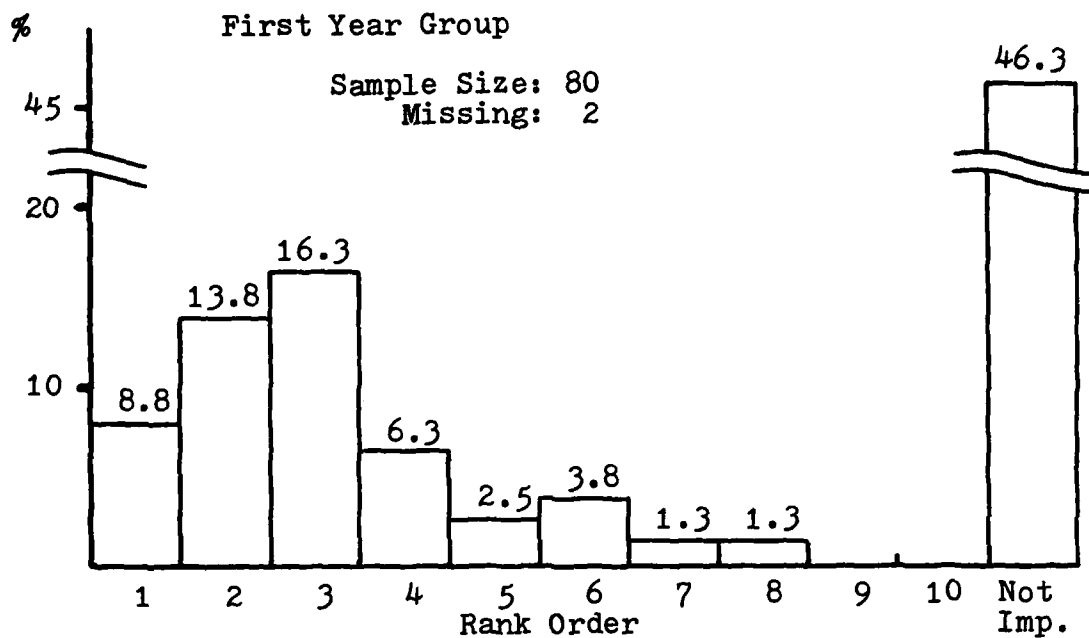


FIGURE D.18

Entry Importance -  
 Retirement Benefits

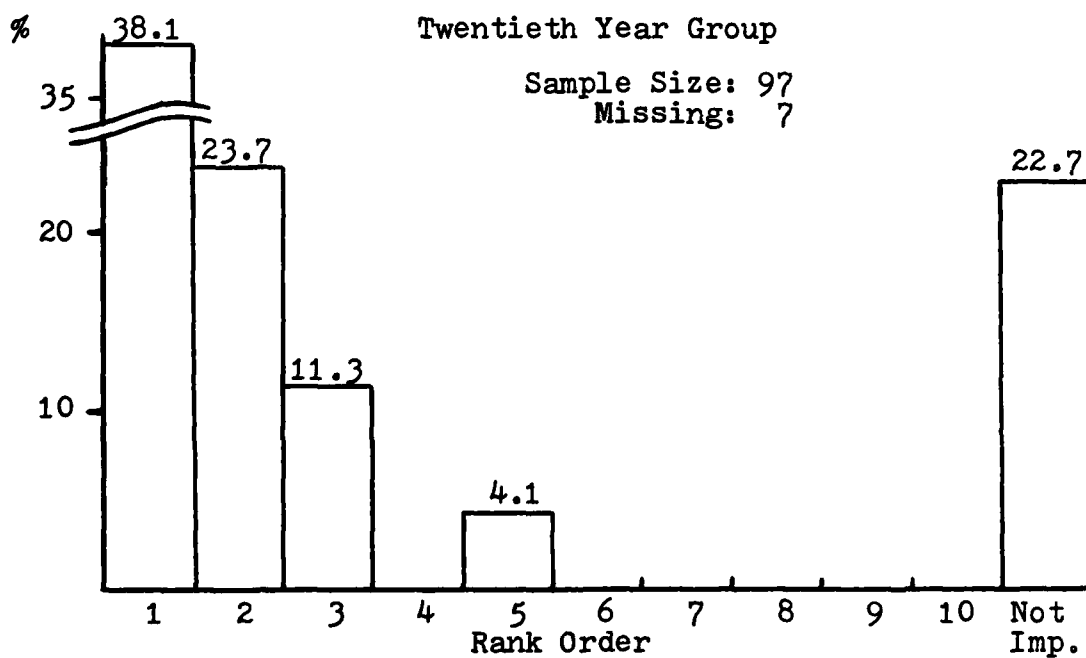
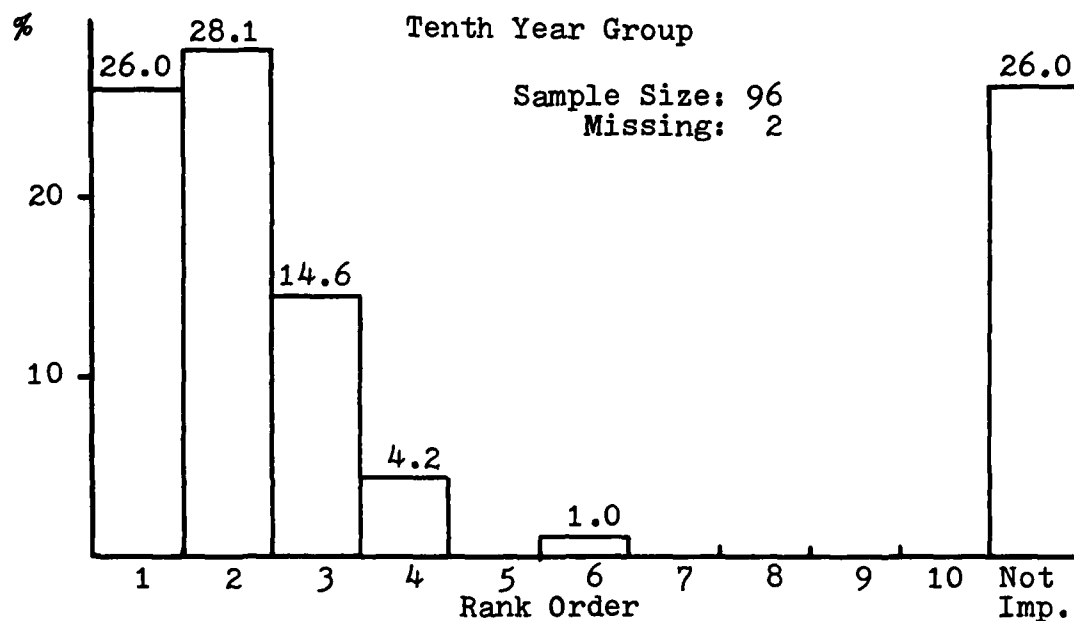


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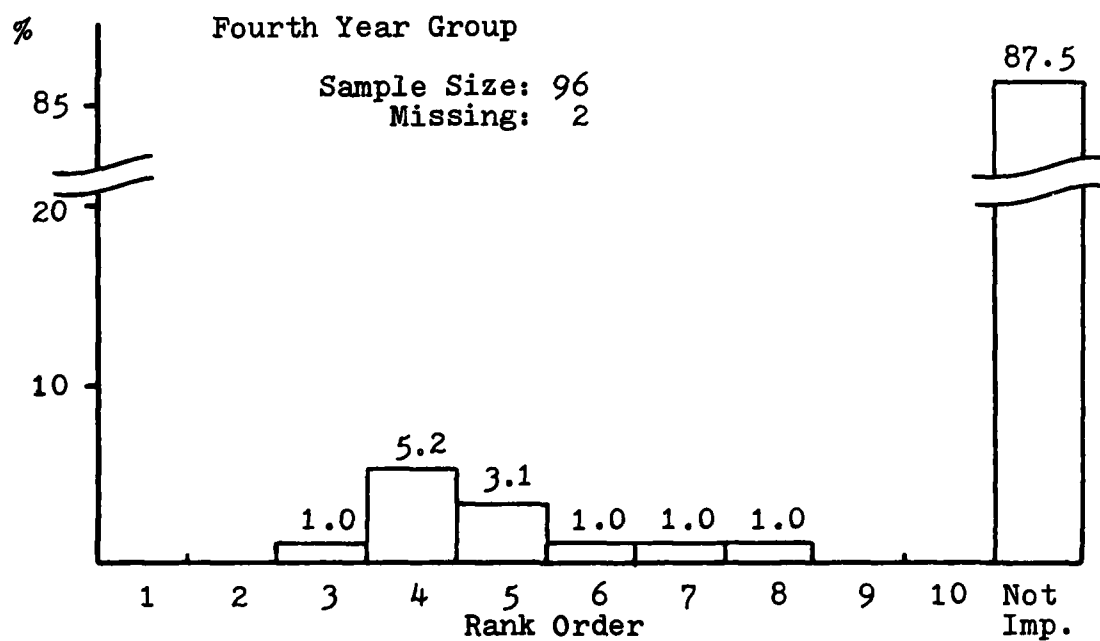
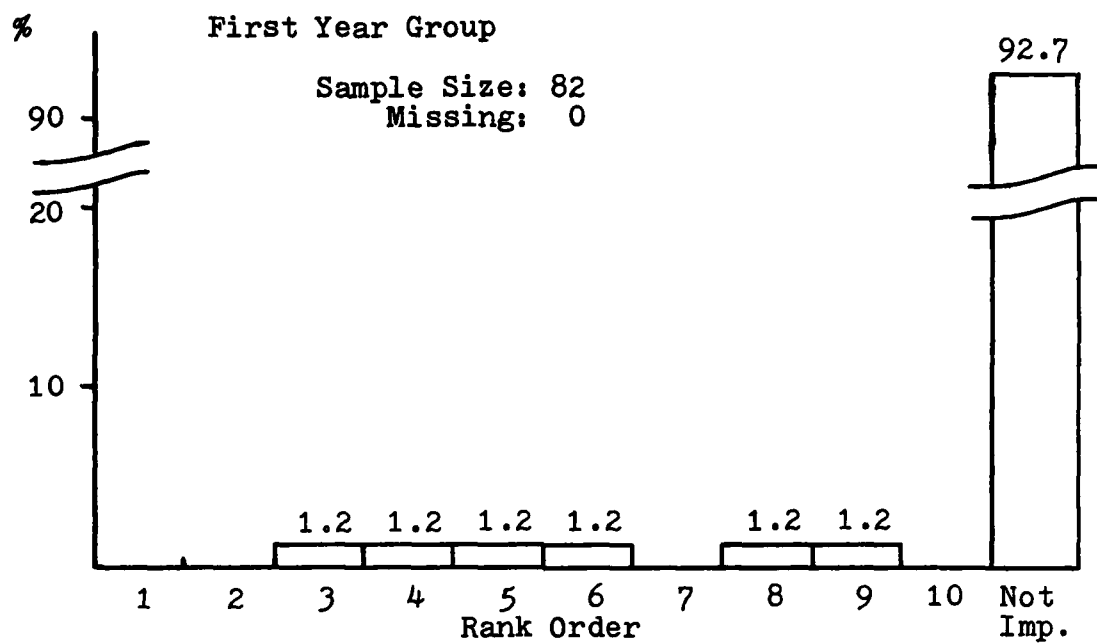


FIGURE D.19

Entry Importance -  
Survivor Benefits

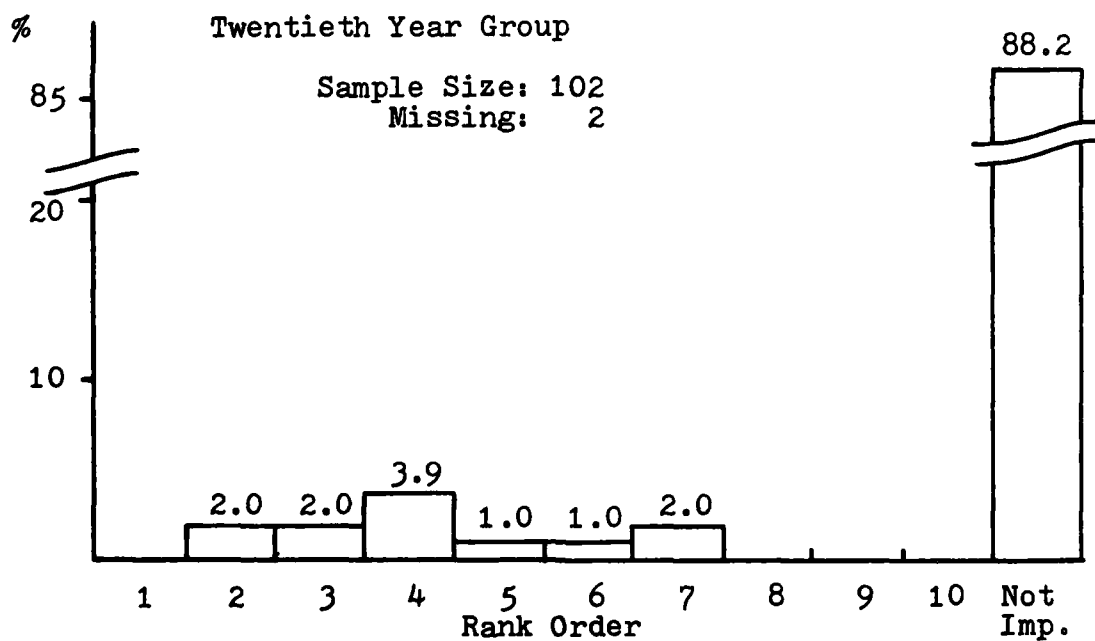
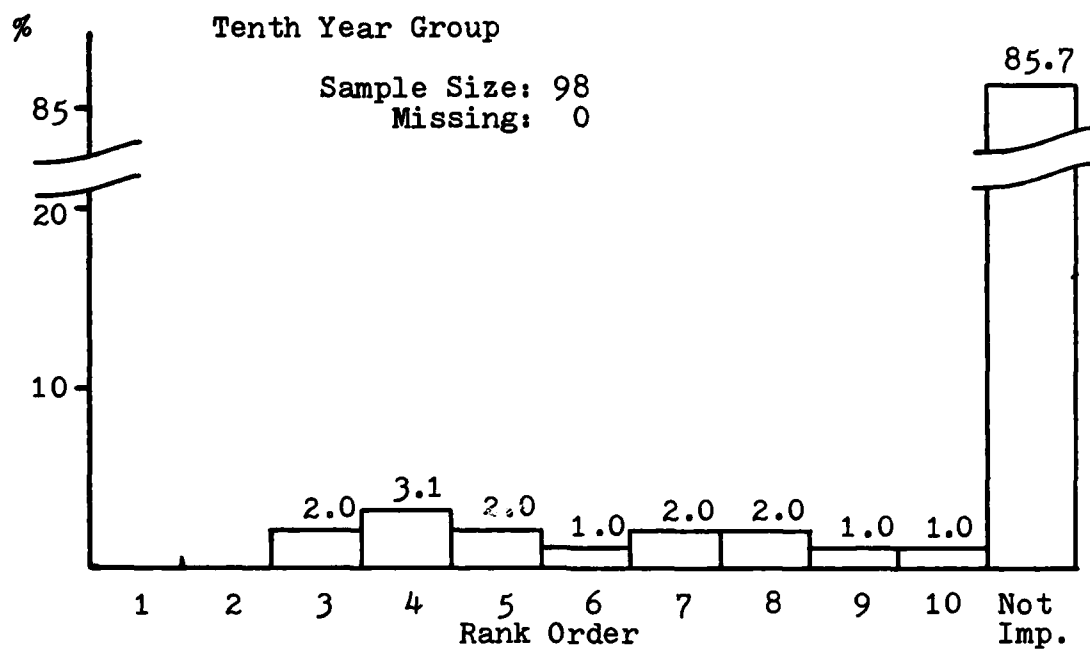


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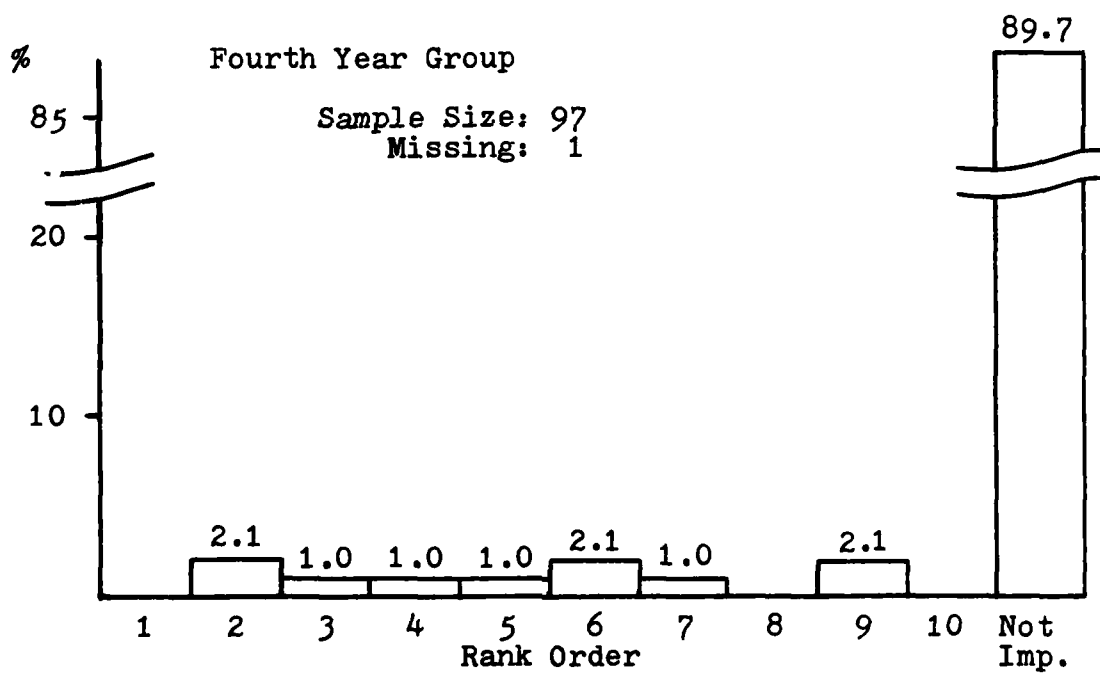
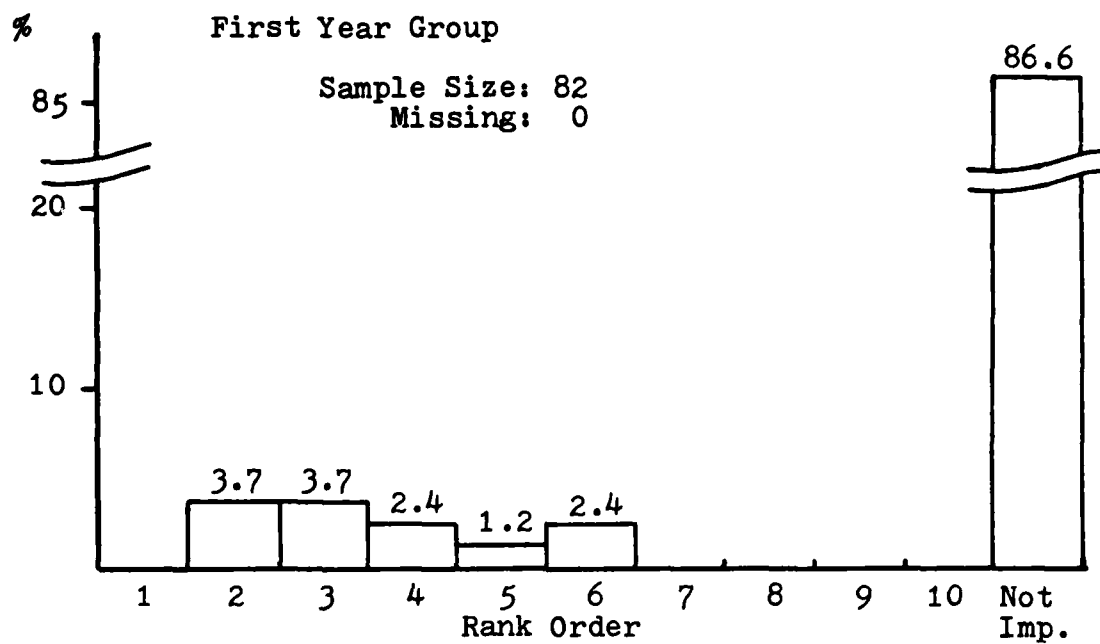


FIGURE D.20

Entry Importance -  
Tax Advantages

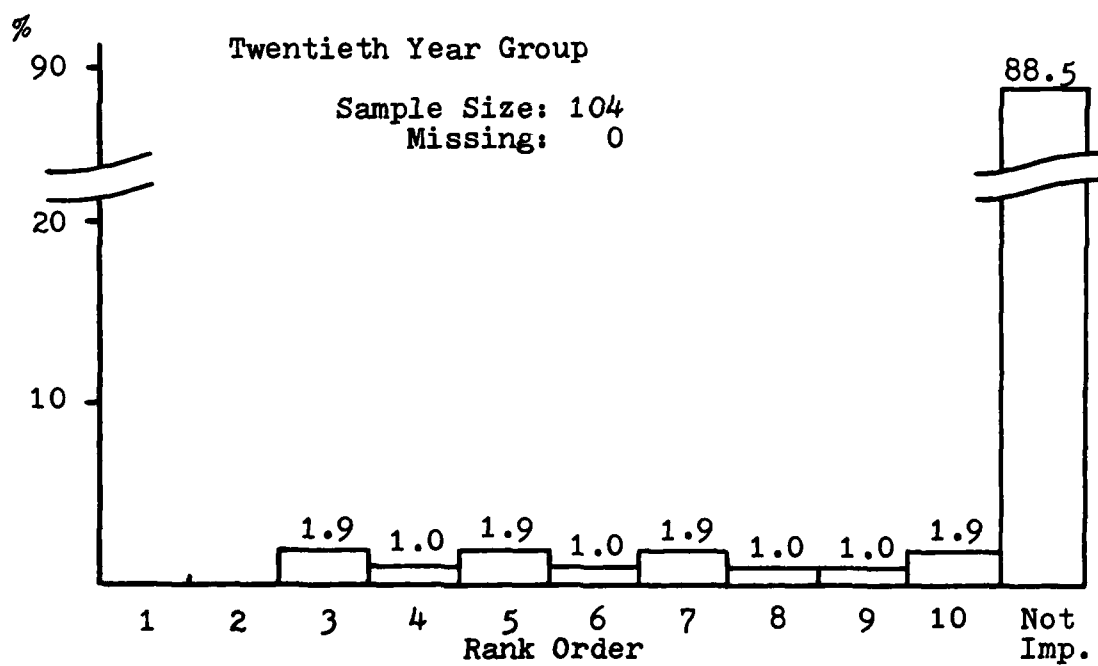
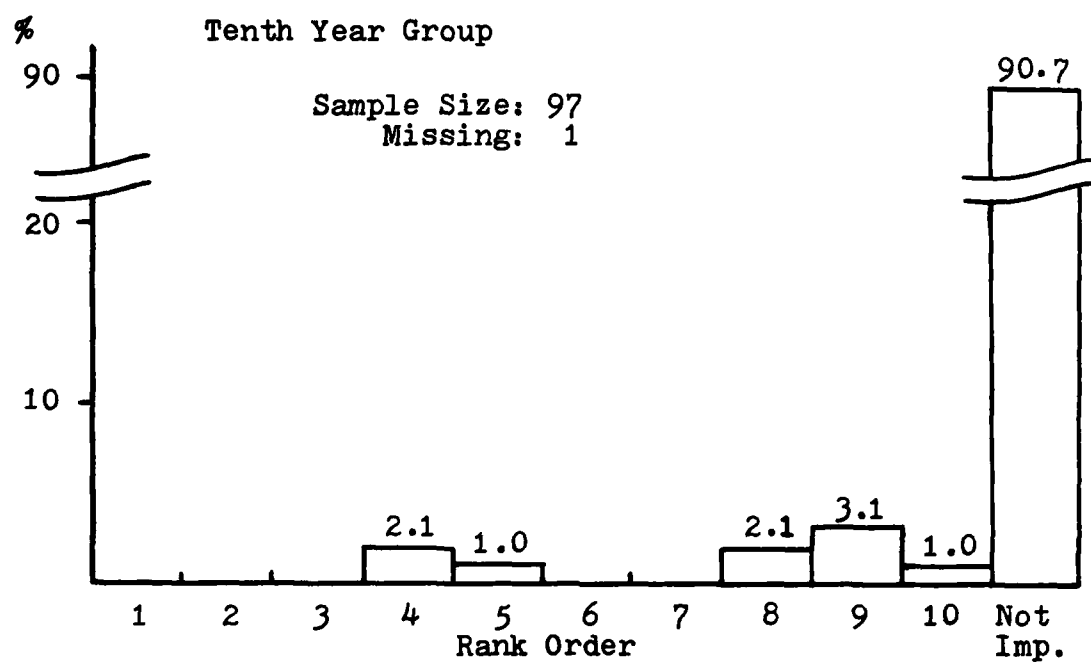


FIGURE D.20  
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### Vita


Captain Daniel A. Cvelbar was born on 4 November 1957 in San Pedro, California. He graduated from the United States Air Force Academy on 30 May 1979 with a Bachelor of Science Degree in Engineering Sciences. Prior to his being selected for AFIT, Captain Cvelbar was a ballistic missile and space propulsion engineer at the Air Force Rocket Propulsion Laboratory, Edwards AFB, California. In that assignment, Captain Cvelbar was responsible for numerous exploratory development programs which directly supported the Peacekeeper and Inertial Upper Stage programs. Upon completion of AFIT, Captain Cvelbar will be assigned to Electronic Systems Division, Hanscom AFB, Massachusetts.

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FIELD <b>05</b>	GROUP <b>09</b>	<b>Military Personnel</b> <b>Personnel Retention</b> <b>Personnel Selection</b> <b>Benefits</b> <b>Recruiting</b> <b>Retention (General)</b>	
19. ABSTRACT (Continue on reverse if necessary and identify by block number)			
<p>Title: <b>A STUDY OF THE RELATIONSHIP BETWEEN YEARS OF COMMISSIONED SERVICE AND THE PERCEIVED IMPORTANCE OF THE MILITARY COMPENSATION PACKAGE TO AIR FORCE OFFICERS</b></p> <p>Thesis Advisor: <b>Charles R. Fenno, PhD.</b></p>			
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This ~~research~~ effort determined the relative importance of the overall military compensation package and its individual features in the decisions of Air Force officers to enter and remain in the service. The research approach included the development of a questionnaire; a survey of Air Force officers in their first, fourth, tenth, and twentieth year of commissioned service; and data analyses which relied primarily on contingency table analysis techniques. The results include the ranking of ten compensation features in the order of importance for the time the survey respondents decided to enter the Air Force and the present. The rankings were compared for differences among the four year groups, and for changes between the time of entry and the present. One major conclusion of this investigation is that the compensation package is of greater value in retaining than in recruiting Air Force officers. A second major conclusion is that officers currently in the Air Force perceive that the compensation package is of greater importance in recruiting officers than officers who recently entered the Air Force indicate. It was therefore recommended that policymakers exercise caution when examining attitudes and feelings of Air Force officers. Recommendations of increased compensation for the purpose of enhancing recruitment could contribute to ineffective and inefficient results.

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